

THE STRAITS SETTLEMENTS  
MEDICAL REPORT  
FOR 1903.

Population and Health.

1. The following Table shews the estimated population and the birth and death-rates for the years 1902 and 1903 in the several Settlements.

	Estimated mean Population.		Births.		Deaths.		Birth Ratio per mille.		Death Ratio per mille.	
	1902	1903	1902	1903	1902	1903	1902	1903	1902	1903
Singapore	235,301	240,833	4,852	5,089	12,485	11,505	20.62	21.13	53.06	47.77
Penang	129,546	130,121	2,379	2,495	5,787	4,988	18.37	19.17	44.67	38.33
Dindings	4,181	4,236	135	136	185	137	32.29	32.10	44.25	32.34
Province Wellesley	110,267	117,078	3,698	3,813	3,476	3,279	31.82	32.57	29.90	28.01
Malacca	95,924	96,276	3,457	3,976	3,037	3,332	35.50	41.30	31.66	34.61
Total ...	581,219	588,544	14,521	15,509	24,970	23,241	24.98	26.35	42.96	39.49

2. A notable and satisfactory feature in the above Table is that in all the Settlements excepting Malacca the birth-rate in 1903 has gone up and the death-rate has fallen. The high death-rate in Malacca the Colonial Surgeon attributes, among other causes, to the heavy infantile mortality.

3. The death-rate for the whole Colony was 39.49 in 1903, as against 42.96 in 1902, and 39.85 in 1901, and taking this as our guide the public health of the Colony was better than in the previous two years, but it could not be considered as good. The improvement of the rate in 1903 over that of 1902 is, however, more apparent than real, for eliminating the deaths which took place on the quarantine stations, the rates would stand at 40.21 in 1902 and 39.01 in 1903, a slight improvement only.

4. Out of the total number of deaths registered in 1903, 3,865 were among infants of under one year old, against 3,631 in 1902. This high infantile mortality, which was greatest among the natives, was no doubt due to want of care and over feeding. Another factor contributing to the high death-rate in this Colony is the large number of paupers and decrepit people who find their way here from the neighbouring countries. The Colonial Surgeon, Penang, reports that strict measures are being carried out there against the landing of such undesirable people.

5. The following Table gives the number of zymotic diseases in the several

Settlements in the years 1902 and 1903, and deaths therefrom, not of course including cases imported to the Colony.

	Plague.				Cholera.				Small-pox.			
	1902		1903		1902		1903		1902		1903	
Singapore	4	4	3	3	842	759	226	190	159	67	109	29
Penang Province	...	...	...	...	9	7	...	...	304	91	227	57
Wellesley	...	...	...	...	41	33	...	...	85	19	258	49
Malacca	...	...	...	...	1	1	...	...	57	22	266	40

*Plague.*—The three cases of plague in 1903, all of which proved fatal, took place in different parts of the town among persons who had been resident here for not less than one year. One was an Indian and two were Chinese. All three cases were verified by bacteriological examinations and in no one could the source of infection be traced.

*Cholera.*—There were 226 cases in Singapore with 190 deaths, but none in the Settlements. The outbreak was not so severe as that of the previous year. Five cases occurred in the Lunatic Asylum, three proving fatal.

*Small-pox.*—The cases in all the Settlements were a continuation of the previous year's outbreaks and in Province Wellesley and Malacca far exceeded those of 1902.

Several cases where the persons responsible had failed to report occurrences of small-pox were prosecuted by the Municipality in Singapore and heavy fines imposed. In Penang the Colonial Surgeon reports that no less than 20 cases were discovered after death.

*Enteric Fever.*—One hundred and forty-eight cases, with 47 deaths, were reported in Singapore, of which 103 were treated in hospital, with 46 deaths. One hundred and forty deaths are reported from Penang and only 3 cases appear to have been admitted in the Malacca hospital—two of these died. Reliable statistics from enteric fever cannot be obtained unless the cases are admitted into hospital or attended to by qualified medical practitioners. Although all dead bodies within Municipal limits are inspected after death, to diagnose a case of enteric properly after death, except by *post mortem*, is difficult.

*Measles, Etc.*—A few cases of measles, dengue and chicken-pox were reported in each of the Settlements. Three cases of diphtheria were treated in hospital in Singapore.

6. *Beri-beri.*—There were 1,919 admissions into hospital with 647 deaths, against 1,901 admissions and 575 deaths in 1902. The total number of deaths from this cause registered in 1903 was 1,729, and in 1902 it was 1,607. Although these figures are not so high as that of 1901, when the number registered was over 2,000, yet they shew that beri-beri still contributes a high per-cent in the mortality rates.

An interesting report by Dr. Leask on the existence of beri-beri in the prison at Singapore accompanies his report on the prison sanitation.

7. *Venereal Diseases.*—The admissions to all the hospitals from venereal diseases for 1903 numbered 1,818, with 96 deaths. It is satisfactory to notice the appreciable decrease in these figures as compared with those of the previous two years, which were 2,341 admissions, with 90 deaths, in 1901, and 3,149 admissions with 171 deaths in 1902.

Of the admissions in 1903, 1,632 were males and 186 females, of whom 152 were prostitutes.

8. *Sanitation.*—The general condition of the Colony, so far as the Municipalities of Singapore, Penang and Malacca are concerned may be considered satisfactory. The special feature in Malacca is that no outbreak of cholera has taken place there since the Municipal water supply was established.

At Butterworth sanitation has been much improved during the year, great activity is being shewn in the substitution of brick buildings for atap houses. Improvement is also reported in the other districts.

9. All the reports from the hospitals in the Colony, excepting Butterworth, state that the quantity of water supplied was unlimited and the quality was good.

10. *Hospitals and Work Done.*—The total number of admissions into the hospitals during 1903, excluding the Lunatic Asylum, was 23,150, against 25,624 in 1902. Excepting in the Tan Tock Seng Hospital and Quarantine Station in Singapore, the Leper Asylum at Pulau Jerejak, the District Hospitals at Butterworth and Bukit Mertajam in Province Wellesley and Jasin in Malacca the admissions into the other hospitals have decreased.

11. The following Table shews the work done for the last three years.

	Number of Patients Treated.			Number of Deaths.			Per-cent of Deaths to Total Treated.		
	Europeans.	Asiatics.	Total.	Europeans.	Asiatics.	Total.	Europeans.	Asiatics.	Total.
(a). 1901 ...	1,094	26,401	27,495	73	3,943	4,016	6.67	14.93	14.60
(b). 1902 ...	1,159	26,515	27,674	68	4,406	4,474	5.86	16.61	16.16
(c). 1903 ...	1,043	24,324	25,367	45	3,911	3,956	4.31	16.07	15.6

(a). Includes 363 cases and 56 deaths in Lunatic Asylum. (b). Includes 331 cases and 42 deaths in Lunatic Asylum. (c) Includes 400 cases and 55 deaths in Lunatic Asylum.

12. The diseases responsible for the greatest number of admissions and deaths are shewn in the subjoined Tables compared with the corresponding diseases and deaths during 1902.

#### I.—General Diseases.

Diseases.	1902.		1903.		
	Admissions.	Deaths.	Admissions.	Deaths.	
Dysentery ...	... ...	866	262	707	267
Malarial Fever and Cachexia	... ...	2,938	277	1,647	130
Beri-beri ...	... ...	1,901	575	1,919	647
Phagadœna	... ...	200	45	234	60
Tubercle of Lungs	... ...	699	355	730	408
Venereal Diseases	... ...	3,149	171	1,818	96
Rheumatism (acute and chronic)	... ...	436	...	1,075	...
Anæmia	... ...	761	197	964	262
Debility	... ...	926	272	907	339

II.—*Local Diseases.*

Diseases.	1902.		1903.	
	Admissions.	Deaths.	Admissions.	Deaths.
Diseases of the Nervous System (including admissions to the Lunatic Asylum less cases transferred there from other hospitals)	675	113	736	112
Diseases of the Respiratory System (not including Phthisis) ...	915	271	574	108
Disease of the Digestive System (including Diarrhoea) ...	2,367	682	2,028	678
Disease of the Skin ...	2,155	5	2,626	4

III.—*Injuries.*

	1902.		1903.	
	Admissions.	Deaths.	Admissions.	Deaths.
General and Local ...	1,521	54	1,557	56

13. *Poisons.*—There were 126 admissions, with six deaths, as follows:—

		Admissions.	Deaths.
Opium	...	...	14
Mercury	...	...	11
Carbolic Acid	...	...	1
Alcohol	...	...	66
Ammonia	...	...	1
Stramonium	...	...	11
Dog Bite	...	...	14
Opium Habit	...	...	14
Morphia Habit	...	...	4
Ptomaine	...	...	1
Hydrargyri Perchloridi	...	...	2

14. *Operations.*—Eighty-nine operations were performed. There were nine deaths. This does not, however, give an idea of the amount of surgery that is done, especially at the General Hospital, Singapore, in connection with the treatment of cases classified under other headings. At the General Hospital, Singapore, alone, 200 such operations were performed.

15. As requested by the Committee of The Cancer Research Fund, two sealed bottles were sent to the Superintendent Victoria Embankment, London. One contained three small portions of a malignant growth removed from a patient at the General Hospital, Singapore, and the other cystic kidneys removed from a patient at the Tan Tock Seng Hospital. Notes of the cases were sent together with the respective bottles. Copies of the notes were also sent to the Colonial Office.

16. The report on the Lunatic Asylum by Dr. ELLIS shews that the recovery rate for 1903 was not so good as in the two previous years. Five cases of cholera took place among the female lunatics, three of which proved fatal. Prompt action in removing them to the Pasir Panjang ward at once stopped the epidemic. It is satisfactory to learn that beri-beri is shewing signs of dying out.

With the increase in the number of patients in the asylum the industry in manufacturing cloth has also enlarged. It is a pity that there is no land available for cultivation.

17. The health of the prisoners and Police Force shews an improvement in 1903 over that of 1902.

18. There was an increase of work in the Maternity Hospital, Singapore. Nearly 50 per cent of the inmates were natives of India. No Malay women appear to go to this hospital but the Chinese are beginning to come to it.

No probationer passed out from this hospital in 1903.

19. The Colonial Surgeons, Province Wellesley, both report a decrease in the number of coolies engaged in the different estates and as a natural consequence the number of coolies treated in hospital has decreased. The general health has improved.

20. After a great deal of correspondence for some years the Government has decided to remove the Tan Tock Seng Hospital to a more healthy site.

21. *Quarantine.*—The work in this Department, both in Singapore and Penang, still continues to be heavy. No less than 424,940 passengers were examined on arrival and 12,991 pilgrims on departure.

One hundred and thirty-six cases of plague were landed on the Quarantine Station at Singapore and considering the close proximity of the town to this place and that not one case has taken place in the town from amongst the passengers landed great credit is due to those in charge of this branch of the Department for their vigilance and care in carrying on their arduous and responsible work.

Much needed improvements were carried out on St. John's Island and the staff has been increased to cope with increased work and so ensure greater efficiency.

22. *Out-Door Dispensaries.*—All the returns from the three principal dispensaries and those attached to the District Hospitals, except Butterworth, shew increased work.

Eighteen thousand and twenty-nine persons were treated during the year, with an average daily visit of 150. I think that in Singapore there is room for another Out-Door Dispensary in the Chinese part of the town; in any case should the Government at any time take up the question of restricting unqualified private practice the preliminary steps would be the starting of more Out-Door Dispensaries.

23. *Vaccination.*—The total number of vaccinations performed throughout the Colony during 1903 was 15,496, against 14,747 in 1902. The number of births registered in 1903 was 15,509, which shews that very few children (if any) remained unvaccinated. Of course the number vaccinated includes adults but these are comparatively few and there are many children who die before being vaccinated.

The following Table shews the number vaccinated, with the results in the several Settlements.

Settlement.	No. of Vaccinations Performed.	Result.			
		Perfect.	Modified.	Failed.	Unknown.
Singapore	2,738	2,733	...	5	...
	1,337	1,258	2	36	41 (a).
	210	195	...	14	1 (b).
Total	4,285	4,186	2	55	42
Penang	3,419	2,068	541	562	248
Dindings	145	129	5	7	4
Province Wellesley	3,688	2,933	277	467	11
Malacca	3,959	2,740	199	813	207
Total	15,496	12,056	1,024	1,904	512

(a). By Government Vaccinator. (b). By Licensed Vaccinators.

These numbers do not include the vaccinations performed at the Prison or Quarantine Station. The number in Singapore includes 1,547 cases performed by Licensed Vaccinators. Although Saigon lymph was used in all the Settlements the return shews that the best results were obtained in Singapore. This points to the conclusion that the cause of failures cannot be attributed solely to the bad quality of the lymph received sometimes. The per-cent of failures was highest in Malacca, namely 20·53. The Colonial Surgeon, Province Wellesley, attributes the failures there to carelessness of the Vaccinators.

24. *Staff*.—The appointment of Principal Civil Medical Officer, which was vacant at the beginning of the year, was held by Dr. J. LEASK until my arrival here on the 1st July, when I took over charge from him.

Dr. T. C. MUGLISTON, Colonial Surgeon, Penang, returned from leave on 18th January, relieving Dr. G. D. FREER, Colonial Surgeon Resident there, who in turn proceeded on leave in April, his place being filled for the rest of the year by Dr. T. H. JAMIESON, a private Medical Practitioner.

Dr. F. B. CROUCHER, Colonial Surgeon, Malacca, was on leave until the end of August, his place being filled by Dr. W. S. SHEPPARD, Supernumerary Colonial Surgeon.

Dr. W. H. FRY, Colonial Surgeon, Province Wellesley, North, returned from leave on 27th November, relieving Dr. A. KEUN, who acted for him.

Dr. FRASER, House Surgeon, resigned the service on 22nd March, being succeeded by Dr. BARRACK on 30th September.

Dr. CATTO was appointed Resident Medical Officer, St. John's, and Assistant Port Health Officer.

The nursing staff of the Penang General Hospital, which had hitherto been furnished by the French Convent, and it must be said with satisfaction, has been replaced by trained nurses from England, as in Singapore.

25. At the end of the year seven Student Apothecaries of the Straits Government were in the Madras Medical College; one of them has since passed out and been posted to the Butterworth Hospital, the others were well reported on at the last examination.

26. I add as Appendices to this Report Reports on:—

(A). Singapore Hospitals. (B). Penang Hospitals. (C). Province Wellesley Hospitals. (D). Malacca Hospitals. (E). Hospitals for Women. (F). Out-Door Dispensaries. (G). Vaccination. (H). Quarantine. (I). Government Analyst's Department, and I append the following returns for Singapore, Penang, Province Wellesley and Malacca:—

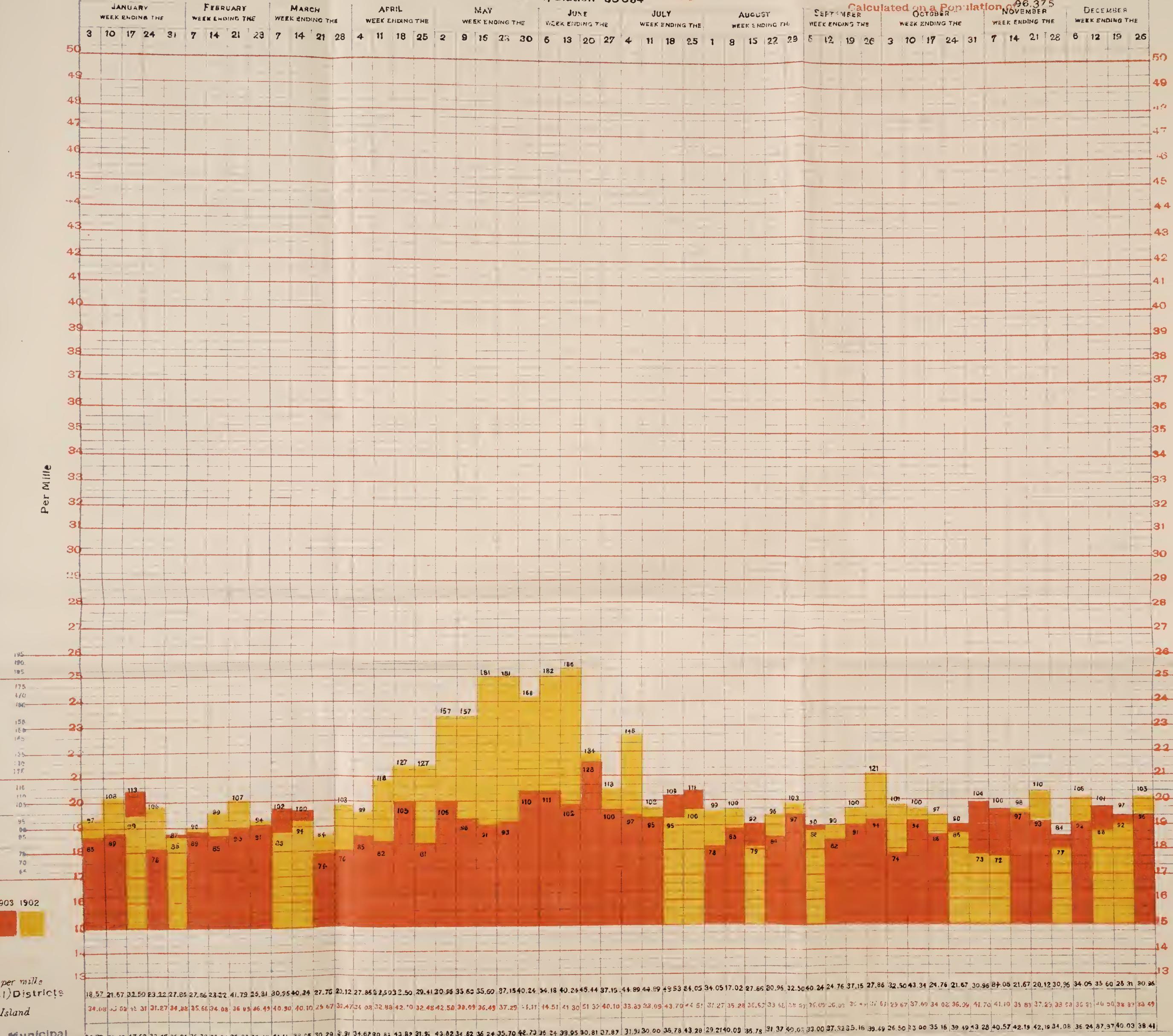
(1) Statistics of Population; (2) Meteorological Returns; (3) Nosological Returns.

D. K. McDOWELL,

*Principal Civil Medical Officer, Straits Settlements.*

Death Rate per Millie calculated on a mean Annual Population of 180,059  
Rural Population 33,684 1903

Death Rate within Municipal Limits  
Calculated on a Population of 96,375





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## APPENDICES.



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## APPENDIX A.

## SINGAPORE.

## General Hospital.

REPORT BY DR. J. LEASK, *Colonial Surgeon Resident.*

1. *Buildings.*—Alterations to some of the sleeping accommodation in the nurses quarters were made, whereby the side verandahs were taken in and eight of the rooms considerably enlarged.

2. It has been decided to construct entirely new quarters in 1904.

3. General repairs to the shutters and other wood-work of the European male block have been carried on. A great deal of the wood-work was in a bad state, and shutters kept falling off.

4. *Grounds.*—The ground behind the western part of the European block was drained and levelled.

5. A similar service to the low ground in front is provided for in the 1904 Estimates.

6. An unclimbable wire fence was erected between the servants quarters and the Hindu temple. Servants and their visitors must now use the front gate, absconders cannot slip out through the temple as formerly, and small articles, the property of the hospital, cannot be smuggled out so easily.

7. *Gas.*—The lighting of the hospital was better this year.

8. *Water.*—The supply was subject to variations of pressure, which ran it short on one or two occasions.

9. *Work Done.*—(See Table A-1.)—This was considerably lighter than in 1902, fewer patients were admitted, there were fewer bad European cases and the average daily sick was lower.

10. Three thousand one hundred and four patients, of whom, 196 were females, were admitted, as against 3,650 in 1902, and the total treated 3,233 as against 3,760 in 1902.

11. The average daily number of sick was 130.22, as against 145.55 in 1902.

12. There were 282 deaths (23 among females) 74 of which occurred within 24 hours of admission.

13. The per-cent of deaths to total treated was 9.029 as against 9.228 in 1902.

14. *European Wards.*—All nationalities are treated in these wards, European beds, food and nursing being provided.

15. There were 564 admissions to these wards of whom 55 were females. European Police are included in the admissions.

16. The diseases for which the greatest numbers were admitted were:—

Intermittent Fever, 56; Venereal Diseases, 51; Alcoholism, 37; Dysentery, 22; Tuberculosis, 21; Debility, 19; Multiple Neuritis, Remittent Fever and Synovitis each 8; Hepatitis, 7; Hepatic Abscess, Beri-beri, Appendicitis and Stricture of Urethra each 6; Fistula in Ano and Asthma each 5; Gout, 4; Pneumonia, 3 and Meningitis, 2.

17. Local Injuries were the cause of 39, and General Injuries of 6 admissions.

18. *Zymotic Diseases.*—The admissions were:—

Dengue, 16; Enteric Fever, 12; Small-pox, 11; Diphtheria, Measles and Influenza each 2 and Cholera, 1.

19. *Transfers.*—There were 11; to the Lunatic Asylum 8, to the Pauper Hospital 2, and to the Native Ward, 1.

20. *Deaths.*—There were 23 deaths of patients in the European Wards (4 being females), from Dysentery and Hepatic Abscess 3 each, Tuberculosis, Small-pox and Burns 2 each, Appendicitis, Remittent Fever, Pyelitis, Fatty Degeneration of Heart

and Liver, Strangulated Hernia, Meningitis, Valvular Disease of Heart, Asthma, Pneumonia, Carcinoma of the Mamma and Sarcoma of Tongue, 1 each.

21. The per-cent of deaths to total treated was 3.833.

22. *Native Wards (not including native Police).* There were 2,187 patients, of whom 141 were females, admitted as against 2,517 and 136 respectively in 1902.

23. The diseases for which the greatest numbers were admitted were:—Intermittent Fever, 321; Mania, 116; Venereal Diseases, 109; Beri-beri, 103; Dysentery, 85; Tuberculosis, 55; Abscess, 43; Pneumonia, 38; Ulcer, 37; Bronchitis, 28; Scabies, 26; Diarrhoea, 25; Debility, 23; Alcoholism, 22; Malarial Cachexia, 21; Anaemia, 19; Remittent Fever, 18; Rheumatism, 17; Febricula, 14; Dyspepsia, 13.

24. Local Injuries were responsible for 460, and General Injuries for 109 admissions.

25. *Zymotic Diseases.*—The admissions were:—

Enteric Fever, 71; Dengue, 19; Measles, 4; Small-pox and Cholera, each 1.

26. *Transfers.*—There were 158 to the Lunatic Asylum 146 (133 males and 13 females); to the Paper Hospital, 9; to the Quarantine Camp 2, and to the European Wards 1.

27. *Absconders.*—There were 122, a great many of whom were *sinkehs*.

28. *Deaths.*—There were 258, (19 of whom were females). The diseases causing the greatest numbers of deaths were:—Enteric Fever, 24, Beri-beri, 20; Dysentery, 19; Tuberculosis, 16; Pneumonia, 7; Remittent Fever, 6; Intermittent Fever and Malarial Cachexia, each 3.

29. Local Injuries were responsible for 18, and General Injuries for 8 deaths.

30. The per-cent of deaths to total treated was 11.37.

31. The number of native private patients depositing money to defray hospital expenses was 778, as against 1,001 in 1902.

32. *Native Police.*—There were 353 admissions, as against 397 in 1902.

The diseases for which the greatest numbers were admitted were:—Venereal Diseases, 60; Intermittent Fever, 52; Colitis, 22; Dysentery, 11; Ulcer, 11; Beri-beri, 9; Asthma, 8; Rheumatism and Bronchitis each 7; Malarial Cachexia, 5; Pneumonia, 3.

33. *Local Injuries* were the cause of 19 admissions, and there were 38 cases of "Observation," mostly malingering.

34. *Zymotic Diseases.*—There were 16 cases of Dengue.

35. *Absconders.*—There were 35.

36. *Deaths.*—One Sikh died from pneumonia. The per-cent of deaths to total treated were 0.275.

37. Microscopical and bacteriological diagnoses have been made in confirmation of clinical diagnoses in all cases of intermittent and remittent fevers, and tuberculosis in the hospital. Specimens of blood of enteric fever patients have been sent to the Bacteriologist for a similar purpose.

38. *Medico-legal Work.*—There were 914 cases sent to hospital by the Police for examination and admission as against 1,165 in 1902.

39. There were 76 dead bodies sent for *post mortem* examination, by the Coroner, as against 187 in 1902.

40. There were 161 persons sent to hospital for observation as to sanity, as against 165 in 1902.

41. The Police find so many of these cases about the streets that on occasion all six observation cells at the hospital are full, and more cases are kept waiting in the cells at the Central Police Station until there is room (it may be for several days) at the hospital.

42. Many are acutely maniacal, noisy, violent and sleepless, and disturb the patients in the wards very much by the uproar they make; loud shouts, yells, screams, and the rattling of cell doors are to be heard for some distance.

43. Their certification as insane may be quickly done, but they cannot be sent to the asylum without a commitment order of a magistrate, and they sometimes spend several days at the hospital before this is obtained.

44. It would be much to the advantage of the unfortunate patients in the adjoining wards, who have to put up with this fairly continuous disturbance if the Colonial Surgeon Resident were empowered to send acute cases to the Lunatic Asylum on our emergency certificate, as is done in Scotland, thus securing for the insane patients immediate skilled treatment, and for the hospital patients peaceful nights.

45. *Operations.*—There were 200 surgical operations performed, requiring the administration of an anæsthetic. The anæsthetic used was Chloroform. Besides these there were numerous minor operations performed, a local anæsthetic, Ethyl Chloride, Ether spray or Cocaine being used.

46. Ethyl Chloride has now been used for several years and has proved most efficacious, and has saved a very great deal of time. The supply, however, has not been up to the demand.

47. As far as I am aware Chloroform has only proved fatal in one case in this hospital, a year or two ago, though it has been administered many thousands of times.

48. Some of the operations of interest were:—Fistula in Ano, 10; Excision of Inguinal Glands, 10; Amputations of Limbs, 9; Paracentesis Thoracis, 7; Hæmorrhoids, 5; Exploratory Puncture of Liver, 5; Evacuation of Liver Abscess, 4; Radical Cure of Hydrocele, 3; Laparotomy, 3; Enucleation of Eyeball, 3; Strangulated Hernia, 3; Radical Cure of Hernia, 2; External Urethrotomy, 2; Tracheotomy, 2; Curetting Uterus, 2; Litholapaxy, Trephining Fractured Skull, Trephining Mastoid Cells, Lumbar Puncture, Tenotomy Fendo Achilles, and Ligature of Common Carotid Artery for Traumatic Aneurysm, each 1.

49. *Staff*—Extensive changes took place this year which have not failed to tell heavily against the administration of the hospital through loss of continuity.

50. Dr. ELLIS was in charge of the Native Wards up to the 1st July, and of the whole hospital for a few days at the end of August, when I went on vacation leave.

51. During my leave, from 28th August to 30th November, Dr. ELLIS was in charge of the European Wards and Dr. SHEPPARD was in charge of the Native Wards during the same time, with the exception of a few days at the end of August and the beginning of September.

52. I was in charge of the European Wards up to 1st July, when I resumed full charge until 28th August. On my return from leave I resumed charge on 30th November.

53. *House Surgeons.*—Dr. FRASER resigned his appointment on 22nd March, and was succeeded temporarily, firstly by Assistant Surgeon BATEMAN, secondly by Dr. JOHN CATTO, on 31st May, and thirdly by Assistant Surgeon PESTANA, on 19th July, who acted until the arrival of Dr. J. W. BARRACK on 30th September.

54. Mr. D. M. FORD, the other House Surgeon, has been stationed at this hospital all the year, and did a great deal of good microscopical and bacteriological work.

55. *Dressers.*—Senior Grade Dresser R. H. RUFUS, and Second Grade Dresser R. M. NUNIS did excellent work during the year.

56. Third Grade Dresser JOHN ANDREW succeeded Dresser P. M. NUNIS on 5th December.

57. Consequent to the Nurses being withdrawn from the Native Wards two Dressers were added to the Establishment, and Apprentice Dressers A. DANKER and C. E. VAN WEIRINGEN were appointed on 11th July.

58. Dresser GEORGE RODRIGUES resigned on 30th November and was succeeded by VENASI TAMBY on 1st December.

59. All the Nursing Sisters from Europe were changed. Misses CLARKE and ELLIOTT left in May at the termination of their three years' agreements. Miss M. J. P. SHAW was transferred to Penang in August, Misses BOTHWELL and STACEY left in August, Miss KILGALLEN in September, and Miss KNAGGS in October.

60. To replace these Miss G. M. WICKS arrived on the 12th May, Misses

HOGARTH, MCNAIR and HYDE on the 14th October, Misses SMITH and H. M. SHAW on the 27th October, Miss McDONALD on the 1st November, and Miss COLECLOUGH on 25th November.

61. Miss CONSTANCES TREVELYAN HAWDON arrived and assumed the duties of Head Sister on the 3rd December.

62. Three of the Nursing Probationers passed the final examination successfully. Miss E. HODGE, Miss AGNES STEPHEN and Miss F. COWIE. The last named resigned on 31st October.

63. *Steward*.—An European Steward was engaged and commenced his duties on the 1st January.

64. The Clerk does not seem to be able to cope with his work or keep it up to date. He has, however, kept the patients' property accounts correctly and well. A typewriter has been authorized for 1904, and when this is purchased he hopes to get through the work more rapidly.

65. The same Bill Collector has been employed during the year.

66. Up to 1900 one man did the work of these three officers, but it was found to be too much for one on account of the increase of clerical work.

TABLE A-1.

General Hospital, Singapore, 1903.	Remaining 31st Dec., 1902.	Admitted, 1903.	Total treated, 1903.	Discharged.	Transferred.	Absconded.	Died.	Remaining 31st Dec., 1903.	Per-cent of deaths to total treated.
European Wards	36	564	600	545	11	1	23	20	3.833
Natives	83	2,187	2,270	1,650	158	122	258	82	11.37
Native Police	10	353	363	315	Nil	35	1	12	0.275
Totals ...	129	3,104	3,233	2,510	169	158	282	114	9.029

### Police Force.

REPORT BY DR. W. G. ELLIS, *Police Surgeon*.

1. The total number of the Force attending the out-patient room at the Central Station was 3,478, as compared with 4,305 for 1902.

As usual many of these were malingerers, and when it could be definitely brought home to them they were reported and punished.

2. The greatest number seen on any one day was 33, the lowest 2.

3. The average daily number attending shows a decrease on previous years, due probably to fewer coming up with trivial complaints, or with nothing the matter with them. It was as follows:—

		1899	1900	1901	1902	1903
January ...	...	32.72	17.69	14.12	12.92	12.08
February ...	...	23.95	18.33	12.55	11.70	15.90
March ...	...	29.76	18.15	13.73	11.12	11.72
April ...	...	28.04	18.02	14.86	17.10	12.14
May ...	...	28.57	19.01	12.34	17.32	11.68
June ...	...	25.65	22.64	12.33	17.70	13.74
July ...	...	23.03	18.72	11.77	15.00	12.18
August ...	...	22.37	18.97	12.65	12.05	11.08
September ...	...	28.65	16.04	13.08	14.00	10.46
October ...	...	29.19	21.93	12.66	14.10	10.25
November ...	...	26.65	21.50	13.2	14.10	10.63
December ...	...	25.84	18.91	13.08	16.22	10.30

4. Of the out-patients seen 317 were sent to hospital as in-patients, compared with 556 sent to hospital in 1899, 290 in 1900, 294 in 1901, and 350 in 1902. Others of the Force, amounting to 85, have been admitted to the General Hospital for treatment, having been sent by Inspectors as urgent cases; of these I have no records.

5. The 317 were suffering from the following disorders:—

Intermittent Fever, 41; Fevers not diagnosed, 20; Dengue, 13; Measles, 1; Mumps 1; Tonsillitis, 2; Beri-beri, 7; Bronchitis, Pneumonia and Asthma, 11; Laryngitis, 2; Heart Disease, 1; Pulmonary Tuberculosis, 4; Appendicitis, 1; Dysentery, 14; Diarrhoea, 19; Rheumatism, 12; Venereal Diseases, 60; Ulcers, 12; Skin Diseases, 12; Eye and Ear Diseases, 6; Cellulitis, 26; Stricture of Urethra, 2; Hydrocele, 3; Surgical Injuries, 11; Alcoholism, 4; Debility, 8; Malingering, 24.

6. The health of the Force has been good, there being no epidemic and but little serious disease. Venereal affections are as prevalent as ever, and are likely to continue so long as the prostitutes of the town are allowed to spread infection broadcast. Fewer cases of intermittent fever have occurred than in former years and all were of a mild tertian type. This must not be taken, though, as in any way due to the propagation of the theory of the action of the mosquito in the disease, for but a short time ago at a station where the disease is endemic, where I had on many occasions carefully explained to the inmates that theory, I found a gentleman from Johore, a native *pawang* (doctor), placing charms and other rubbish over the doors of the quarters, and this was the only prophylactic used. Malay-like, to boil the drinking water was troublesome, mosquito curtains an unnecessary expense, to take a nasty tasting drug like quinine when not ill was a nuisance, and it was so easy to call in a *pawang* for a few cents and so save all bother.

7. I regret to have to report the death of an European Inspector from Hæmorrhagic Small-pox. But one other death occurred during the year, a Sikh police constable who had suffered from pneumonia.

8. One European, 1 Eurasian, 6 Sikhs, and 8 Malays and Indians were boarded out during the year as unfit for further service. Four hundred and twelve candidates for the Force were examined during the year; of these 340 were passed as fit and 72 were rejected.

The causes for rejection were as follows:—

Over Age, 16; Phthisis, 9; Ill development and Deformities, 9; Heart Disease, 6; Hernia, 2; Eye Affections and Impaired Sight, 13; Morphia Habit, 1; Venereal Diseases, 9; Anæmia, 3; Enlarged Spleen, 2; and Hydrocele, 2.

The nationalities were:—

Nine Europeans passed and 1 rejected, 191 Malays and Indians passed and 36 rejected, 90 Chinese passed and 21 rejected, and 50 Sikhs passed and 14 rejected.

9. Fifteen Sikhs were examined for re-engagement. Of these 14 were passed as fit for a further term of service and one was rejected suffering from incipient phthisis.

With one or two exceptions all of the 35 stations were inspected by me twice, and many of them more than twice, during the year; their sanitary condition is fairly satisfactory, though showing signs of being more neglected than formerly. The latrines in four need immediate attention, the drainage of four is in a bad state, the compound of one and the dust-bins of another were filthy when I last inspected. The European Police Constables' quarters at one station were unfit for habitation, and the over-crowding in one of the town stations still exists to a dangerous extent though I have called attention to it on several occasions. Details of inspections are from time to time forwarded to the Chief Police Officer.

### Prison Hospital.

REPORT BY Dr. J. LEASK, *Colonial Surgeon in Charge.*

1. The sanitary condition of the Prison may be considered good, though there are some points with regard to ventilation which are worthy of further investigation. I refer more particularly to the cells, which have already been under consideration, and to the Middle Grade work-yard, where I would recommend ventilating roofs.

2. Little can be said against the water supply, as it is Municipal water, and moreover the water supplied to the prisoners is previously boiled. Notwithstanding this, three cases of enteric fever have occurred in prisoners who had been in prison, long beyond the incubation period of that disease, and a particularly virulent form of dysentery has prevailed.

3. Alterations in the drainage have been made by closing underground and making surface drains instead.

4. The substitution of brick for corrugated iron partition walls, in the cells of the Blocks, has been carried on as in previous years, the improvement giving less harbour for vermin.

5. The removal of honeycomb brickwork at the ends of the Blocks and the substitution of iron bars, has been carried on, which should improve the ventilation of the halls, and to some extent the cells in these halls.

6. The nuisance mentioned in last year's report regarding the method of removal of night-soil, has been greatly abated, the night-soil from the prison being now emptied directly into the carts, without the intermediary of the storage tank.

7. The health of the prisoners has been better than in 1902. There have been fewer admissions into hospital—1,041 as against 1,406 in 1902—and the average daily sick has been much lower, *viz*: 44.96, as against 74.57 in 1902.

8. The number of deaths in hospital has been 45 as against 38 in 1902, giving a death-rate of 40.7 per mille to total treated, against 26.04 in 1902.

9. The total number of deaths from natural causes in the prison gives a death-rate of 47.7 per mille to prison population.

10. A very large number of prisoners report sick for trivial complaints (many in order to get off work) and come up for treatment during the day. With such a disease as beri-beri in the prison every such case receives prompt and special attention; the work of the subordinate staff in the day-time is continuous and trying until the prisoners are locked up for the night.

11. There have been a number of cases of chicken-pox in the warders' families, but no cases have occurred in the prison.

12. *Crank*.—This has been reduced from 14 to 12 pounds pressure and 12,500 to 10,000 revolutions.

13. *D.e's*.—An alteration in the diets was made on 1st October, and the weights of the prisoners are being noted. So far as I can learn from the figures available there does not seem to be any falling off in the weights, but there has scarcely been time enough yet to judge. I have recommended a few alterations in my special report on this.

Out of 3,272 prisoners admitted to prison 916 showed signs of present or past venereal disease as against 1,177 in 3,035 admissions in 1902. All were in males.

14. A premature confinement occurred on 28th January in the case of a Chinese undergoing simple imprisonment; she was in the seventh month of pregnancy and the child was still-born.

15. *Birth*.—A Malay prisoner undergoing a five months' sentence was delivered of a female child on 21st June.

16. *There were Four Transfers to Lunatic Asylum* :—(1) Revenue Grade No. 2, Kling (female); (2) Lower Grade No. 5, Chinese (Male); (3) Lower Grade No. 216, Indian (Male); (4) Upper Grade No. 34 Chinese (Male).

17. *There were Five Transfers to Leper Asylum* (all males):—(1) Short-sentence No. 71 (Chinese); (2) Revenue Grade No. 45 (Chinese); (3) Revenue Grade No. 38 (Chinese); (4) Short-sentence No. 228 (Chinese); (5) Lower Grade No. 224 (Kling). All were suffering from leprosy on admission to prison.

18. There were four releases on medical recommendation:—

1. Upper Grade No. 15; Mat Nopiah, an aged Malay suffering from pulmonary tuberculosis.
2. Upper Grade No. 32, a Chinese suffering from debility following beri-beri and dysentery.

3. Middle Grade No. 3, European Prisoner Grosse undergoing a sentence of 10 years was released after undergoing a little more than half his sentence. Although physically well developed he showed signs of nervous breakdown.

4. Upper Grade No. 17, an old Malay prisoner, Hassan, suffering from hemiplegia.

19. *Suicide*.—A Chinese short-sentence prisoner threw himself from the top landing of B hall and died instantaneously from fracture of skull. This is the second suicide in this way.

20. *Deaths Outside Hospital*.—Ho Pean, a short-sentence prisoner, No. 346, was found dead in his cell, No. 172 A hall, on 23rd October.

This patient had shown no outward signs of disease and had made no complaint of being ill. The *post mortem* appearances were those of beri-beri with a pericardium containing 5 ounces of serum. The stomach was distended with fluid matter (over-loaded) which probably brought about the fatal result.

21. *Executions*.—There were none.

22. *Work Done in Hospital*.—There were 63 patients remaining on 31st December, 1902, which, with the 1,041 admissions during 1903 made a total treated of 1,104. Nine hundred and forty-eight were discharged from hospital and 37 were transferred to Malacca in December.

23. There were 45 deaths against 38 in 1902, and there were 74 remaining in hospital at the end of 1903.

24. The per-cent of deaths to total treated was 4.07. The average daily sick was 44.96.

25. The diseases accountable for the greatest number of admissions to hospital were:—

Beri-beri, with 169 cases, as against 415 in 1902; Fevers, with 168 cases as against 188 in 1902; Diarrhoea, with 112 cases as against 186 in 1902; Dysentery, with 104 cases as against 156 in 1902; Minor Injuries, with 69 cases as against 87 in 1902; Eye Diseases, with 57 cases as against 31 in 1902; Dyspepsia, with 43 cases as against 66 in 1902.

26. *Beri-beri*.—One hundred and twenty-five of the total 169 cases of beri-beri were admitted during the last quarter of the year. During the first nine months of the year there had only been 44 admissions.

27. The number of deaths during the last quarter was 14 out of a total of 16 for the whole year.

It has been noticed in previous years that the greatest number of admissions occur in the hot months of May, June, and July and in the last quarter of the year. (See Table A.)

28. Heat and moisture are favourable for the proliferation of micro-organisms, and this may account for exacerbations of beri-beri at these times, the proper degree of temperature and moisture being attained then.

29. This will not always account for those sudden changes of activity which take place at times. The disease may slowly or suddenly disappear and re-appear at varying periods in the same way, and I think a possible explanation of these changes may lie in the supply, outside the human body, of pabulum to the micro-organisms or there may be an accumulation of excretory products of the organisms themselves. The organisms may proliferate so rapidly that they exhaust the available supply of pabulum and become quiescent until a further supply of pabulum is again available, or a favourable environment is attained.

30. The passage of thus weakened micro-organisms through the human intestinal tract would intensify them, therefore too much importance cannot be attached to the proper disinfection of motions.

31. At other times it would appear that the disease had been got thoroughly under. As mentioned in my report of 1898 there was no beri-beri in the prison for 12 years from 1885 to 1897 except two outside cases.

32. The present outbreak began in 1897, the first case being in a prisoner

18 days after admission to prison, the second 13 weeks, and the third six days after admission.

33. The incubation period of beri-beri is not known, Pekelharing makes it as long as five weeks, but it would be reasonable to allow that numbers 1 and 3 were already in the incubatory stage of the disease, and possibly No. 2 also, and it may well be granted that the disease was introduced into the prison by these men, and has now become endemic and has been from the beginning, the cause of 1,319 admissions and 67 deaths. (5·07 per cent of deaths).

34. Many writers have advanced the theory that beri-beri is caused by diseased rice. The experiments made by Dr. Hamilton Wright in feeding prisoners on sterilized rice has exploded this, and that the diets of the prisoners could have nothing to do with the production of beri-beri was clearly shown in 1898 when a number of prisoners suffering from beri-beri were sent over to St. John's Island from this prison.

35. These prisoners were fed on exactly the same food as the prisoners in the gaol. All the rations were first brought to the gaol, divided there, one portion going to St. John's, the other portion being used in the gaol.

36. The prisoners on St. John's Island made remarkably rapid recoveries, while the beri-beri cases kept on occurring at the gaol just as before.

37. *Grades.*—In the Upper Grade 9 cases occurred, in the Middle Grade 37 cases, Lower Grade 27 cases, Revenue Grade 5 cases, Short-sentence 88 cases and Civil prisoners 3 cases.

38. The Lower Grade prisoners, whatever their labour, are always in the yards, and the Middle Grade prisoners in their work-sheds.

39. With the exception of a few men, who are employed as cleaners, Assistant Cooks, Toties, Grass-cutters, the short-sentence prisoners are employed at stonebreaking and wheel, the same labour as the Lower Grade.

40. It is in the men working in the stonebreaking cells and work-yards that most of the cases of beri-beri occur.

41. Very few cases occur in prisoners employed in open air work about the kitchens, halls, or grass-cutting.

42. From this I would infer that the ventilation in the yards is not yet what it should be and that more exposure to sunlight should be allowed, and I would recommend that work outside the prison should be given to those men, as was done before beri-beri broke out.

43. *Nationalities.*—The nationalities of those attacked were: Chinese 155, with 13 deaths; Malays 11, with 3 deaths; Indians 3, no deaths.

44. *Deaths from Beri-beri.*—There were 16 of whom 2 were Middle Grade prisoners, 6 Lower Grade, 7 Short-sentence and 1 Civil Prisoner.

45. Owing to the decrease in the number of beri-beri cases in the first quarter, the temporary work-shed outside D Block, which had been in constant use for five years, was no longer required and sleeping in the old Civil Prison was discontinued.

46. During the last quarter owing to the increase of cases it was found necessary to use the temporary shed again. The hospital was over-crowded, and as the sleeping accommodation at the old Civil Prison was no longer available 37 cases of beri-beri were sent to Malacca.

47. At the end of the year there were 48 cases of beri-beri remaining in hospital.

48. *Dysentery.*—A very severe and intractable type prevailed. One hundred and four cases were admitted with 13 deaths, as against 156 cases and 15 deaths in 1902. During the last quarter there were 50 admissions and 8 deaths. The *post mortem* examinations showed the whole of the large intestine ulcerated, undermined, and in some cases gangrenous.

49. The number of cases in the different Grades were, Upper Grade, 8; Middle Grade, 17; Lower Grade, 18; Short-sentence Grade, 53; Revenue Grade, 6, and Civil Prisoners, 2.

50. The deaths in the different Grades were: Middle Grade, 5; Lower Grade, 1 Short-sentence Grade, 6, and Revenue Grade 1.

51. The nationalities of those attacked were: Europeans, 2; Indians, 6; Malays, 14; and Chinese, 82.

52. Diarrhoea and Dyspepsia have caused considerably fewer admissions than last year.

53. Fevers have been mostly of the Febricula type. No anopheles have ever been found in the prison.

54. *Zymotic Diseases*.—Enteric Fever. Four cases of this disease occurred, all in Chinese, three cases in January within a few days of each other, and the last case in December. All the cases recovered.

55. The first was Revenue Grade No. 93, admitted to prison on 30th October, 1902, on a three months' sentence. He was admitted to hospital on 7th January having had fever for three days. He worked as a cleaner and his cell was in D hall.

56. The second case was Short-sentence No. 306, admitted to prison on 1st December, 1902, on a six months' sentence. He was admitted to hospital on 9th January having had fever for two days; his work had been stonebreaking and treadmill and his cell was in B hall.

57. The third case, Short-sentence No. 14, was admitted to prison on 7th November, 1902, on a three months' sentence, and to hospital on 10th January, 1903, having had fever for three days; his work had been stonebreaking and treadmill and his cell was in B hall.

58. The fourth case was a remand prisoner who was admitted to the Civil Prison on 23rd November, 1903, and was brought to hospital on 4th December, having been ill for about a week. In this case the clinical diagnosis was confirmed by a bacteriological one.

59. The source of infection in the first three cases was probably within, and of the fourth without the prison.

60. *Mumps*.—Fifteen cases of mumps were admitted, occurring in Lower Grade Prisoners, 13; Middle Grade, 1, and Short-sentence Grade, 1.

61. *Dengue*.—Six cases were admitted.

62. *Deaths*.—There were 45 deaths this year in hospital. The causes of death were: Beri-beri, 16; Dysentery, 13; Tuberculosis, 6; Cerebral Apoplexy, 3; Valvular Disease of the Heart, 2; and General Debility, Cirrhosis of Liver, Abscess of Liver, Peritonitis and Glucomi with Embolism of Cerebral Artery, each 1.

63. *Staff*.—Dr. ELLIS was in charge from the beginning of the year until 3rd July, when I resumed charge. During my absence on leave in September, October and November Dr. SHEPPARD had charge with the exception of a few days at the commencement of that time, when Dr. ELLIS acted.

The subordinate staff has worked well and hard. Assistant Surgeon HALE has as in former years, done his work well.

TABLE A.

Table Shewing the Incidence of Beri-beri in the Different Grades.

Grade.	1897	1898	1899	1900	1901	1902	1903
Upper	...	...	7	6	9	13	19
Middle	...	...	94	123	105	55	129
Lower	...	...	8	6	40	40	102
Short-sentence	...	3	12	23	52	102	136
Revenue	...	...	3	6	8	7	19
Civil Prisoners	...	...	...	1	2	2	10
His Majesty's Pleasure	...	...	...	...	1	...	...
Females	...	...	...	...	7	...	...
Total ...	3	124	165	224	219	415	169

TABLE A—Continued.

Table Shewing the Admissions and Deaths from Beri-beri in each Month During the Last Four Years.

		1900.		1901.		1902.		1903.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	...	5	...	15	1	22	1	22	2
February	...	3	...	10	...	8	1	6	...
March	...	1	...	4	...	2	...	6	...
April	...	8	...	17	...	8	...	3	...
May	...	14	2	25	1	18	...	1	...
June	...	32	2	17	3	79	3	3	...
July	...	36	2	23	2	86	...	1	...
August	...	8	1	12	...	27	...	...	...
September	...	32	1	10	...	26	3	2	...
October	...	24	2	19	1	62	1	7	...
November	...	44	7	41	1	35	1	53	6
December	...	17	11	26	...	32	1	65	8
Total	...	224	28	219	9	415	11	169	16

### Tan Tock Seng's Hospital.

REPORT BY DR. DANE, *Colonial Surgeon.*

1. For total number of patients treated and death-rate, *vide* Table I, which also shows the same figures for the previous eight years.

2. *Admissions.*—A large number of the admissions are really re-admissions and this always has been the case here.

(b). Diseases for which admission is chiefly sought are given in Table II.

(c). 9·18 per cent (639 of the 6,968 admissions) acquired their illness outside Singapore: 220 Johore, 143 Adjacent Dutch Settlement, 100 China, India, etc., 84 Protected Native States, 92 Other Places. Total, 639.

3. Average daily number was 589.

During the four weeks, April 24th to May 21st, the Native Male Wards were over-crowded; on one day, May 5th, to the extent of 60 patients over our proper number. The least number of native male patients was 490, on January 31st. The number of native male beds is 600.

4. *Discharges.*—It is greatly to be regretted that so many patients, 80 to 90 per cent, insist on leaving the hospital before they are well, many come back in a short time with a serious, too often a fatal, relapse, this is one cause of the high death-rate.

The reason they want to go out is to beg the price of an opium smoke or of a little tobacco. Another plea is that the fever having stopped or the pain become less, they are fit to work, but any attempt to forcibly detain them might well cause the hospital to be regarded with such aversion that eventually it would become little better than a dying house.

5. *Death-rates.*—The crude death-rate of the hospital is really a poor index to anything, it is the per-cent of the number of deaths to the total treated, but the total treated does not represent the number of separate individuals, as a good many of the patients are admitted two, three, or even four times during the year and the number of deaths is increased by the patients who arrive in a hopeless condition and die within a few days. To get some idea of the number I have taken at random 138 of the deaths and I find that about some 7 per cent of them died within one day of admission. Our total number of deaths was 1,663, and if 7 per cent be deducted it would reduce the number to 1,549. In Table III I have shown these figures for deaths occurring from 1 to 10 days after admission.

6. *Death-rate of Special Diseases.*—The sources of error are, many patients on arrival are suffering from more than one disease. Of 53 Benign Fevers, 8 died, 3 had Pneumonia, 2 had Pleurisy, 1 Phthisis. Of 41 Malignant Malaria, 6 died, 1 had Dysentery, one had Pneumonia, one Extensive Pleurisy, old and recent, one Tubercular Cavity Pulmonary, one a form of Granuloma of Lung. Of those suffering from Typhoid Fever, or Malaria, the chief cause of their immediate dangerous condition may be want of food which they can digest. A very old man comes and he can be entered in the Nominal Register as suffering from Old Age or Anæmia or Diarrhoea, from both of which he is suffering, or a Malignant Malaria case has Beri-beri as well. The chief causes of death in 1903 and some previous years, may be seen in Table IV, while Table V shows the case mortality for certain diseases, but both are but rough guides and attention must be paid to the diseases bracketed together. As to which disease death in a complicated case is ultimately attributed is so much a matter of individual bias that comparisons of figures are misleading.

7. *Notes on Special Diseases.*—During the last four months of the year I had all the fresh cases complaining of fever put under my own observation; there were 170 of them. During that period there were 2,145 admissions, and during the whole year 6,968 admissions  $\frac{6968}{2145} = 3.25$ , very nearly. Of the 170 cases—Miscellaneous, 25. Unclassed,  $44 \times 3.25 = 143$ , (In annual return 163 fever cases are shown.) Enteric, 7. Malaria Benign,  $53 \times 3.25 = 172$ . Malaria Malignant,  $41 \times 3.25 = 133$ , (305 in annual return) 355 malaria cases are shown.

In none of the first three groups were malarial parasites ever found, though frequently sought for. Many of the unclassed fevers were, I consider, benign attacks which yielded to quinine before a second examination of the blood could be made. In all the rest of the cases, except two, malarial parasites were discovered, in all the malignant cases crescents.

8. *Beri-beri.*—The total treated was 1,108, and 395 died=36 per cent: 12.5 per cent of the cases acquired the disease in Singapore. Of the 975 admissions for this disease 39 acquired it in Johore, 25 in neighbouring Dutch Settlements, 33 acquired it in Protected Native States, 24 in various other places. Total, 121, (12.5 per cent of 975).

In the preceding paragraph I refer to the 173 cases admitted for fever and examined by me, 92 of them were proved to be malaria, by the microscope. Of these 92, 13 were complicated by beri-beri; of these 13, in 8 the signs were noted on the day of admission, one in 4, one in 5, two in 6 and one in 10 days after admission, so it was worth while to see how often beri-beri was accompanied by malaria. Twenty-eight cases of beri-beri have had films of their blood sent to DR. FINLAYSON directly after admission, but malaria parasites were only found in one (eovinophilia was found in three others).

9. *State of the Buildings and Removal of Hospital.*—For many years the removal of this hospital to a higher and drier site has been strongly advocated, and it has so long seemed so certain that this would immediately be done that naturally all expenses for current repairs have been postponed again and again; as a consequence many of the wards are now in a somewhat delapidated condition. Bad as the present site is, it is better than any other available site near town, and at the present moment it seems most likely that the hospital will be left where it is, but that the site will be raised and kept dry, etc., by sub-soil drainage and that in future all beri-beri patients will be sent away to the sea-side.

TABLE I.

Year.	Remained.	Admitted.	Total.	Died.	Average Daily Number.	Per-cent-age of Deaths to Total Treated.
1895	536	5,583	6,129	1,465	547	23.94
1896	547	7,041	7,588	2,124	575	26.72
1897	652	7,110	7,762	1,733	598	22.32
1898	617	6,425	7,142	1,402	623	19.63
1899	583	5,887	6,470	1,394	560	21.50
1900	583	5,941	6,524	1,459	574	23.36
1901	549	6,556	7,105	1,694	563	23.84
1902	528	6,562	7,090	1,583	529	22.32
1903	550	6,968	7,518	1,663	589	22.12

TABLE II.  
*Admissions Due to Certain Diseases.*

Diseases.	1903	1902	1901	1900	1899
Beri-beri	...	...	975	752	747
Ulcer	...	...	823	...	743
Rheumatism	...	...	674	...	518
Anæmia	...	...	549	324	294
Debility	...	...	430	362	375
Diarrhoea	...	...	402	296	398
Secondary Syphilis	...	...	344	...	420
Pulmonary	...	...	288	498	412

TABLE III.

One thousand one hundred and sixty-three deaths during the year.

One hundred and thirty-eight of the deaths taken at random shewed that

48 occurred in less than 10 days after admission. This proportion would give 578 of the total admission.

43	"	"	9	"	"	518	"
38	"	"	8	"	"	460	"
37	"	"	7	"	"	446	"
33	"	"	6	"	"	398	"
28	"	"	5	"	"	337	"
24	"	"	4	"	"	289	"
18	"	"	3	"	"	317	"
15	"	"	2	"	"	181	"
10	"	"	1	"	"	120	"

TABLE IV.

*Number of Deaths Due to Certain Diseases.*

Diseases.	1903	1902	1901	1900	1899
Beri-beri	...	395	312	405	305
Diarrhoea	...	252	176	279	285
Dysentery	...	127	96	126	158
Pulmonary Tuberculosis	190	293	273	186	144
Anæmia	...	167	106	99	113
Debility	...	184	118	172	84
Secondary Syphilis	...	54	...	35	38

TABLE V.

*Case Mortality of Most Important Factors of Death-rate.*

Diseases.	1903.	1902.	1901.	1900.	1899.	1898.
	%	%	%	%	%	%
Pulmonary Tuberculosis ...	65	55	63	64	72	72
Diarrhoea ...	60	58	67	63	72	72
Dysentery ...	48	41	55	61	57	61
Beri-beri ...	36	36	47	38	58	53
Fever ...	13	22	10	20	12	15
Malarial Fever ...	16	...	...	...	...	...
Secondary Syphilis ...	15	...	...	...	...	...
Anæmia ...	29	...	...	...	...	...
Debility ...	40	...	...	...	...	...

TABLE VI.

*Table Shewing Place Where Some of the Admissions Acquired their Illness.*

Places.	Beri-beri.	Malaria.
Johore ...	39	15
Dutch Settlements ...	25	8
Protected Native States ...	33	15
Other Places ...	24	4
	121	42

**Quarantine Camp.**

*Small-pox.*—Twenty-nine cases remaining at the end of the year; 80 cases admitted during the year. Total treated, 109.

Ninety-two discharged cured; 17 died. Thirty-three Chinese—of whom 4 were females—46 Klings—of whom 2 were females—24 Malays—of whom 9 were females—6 Miscellaneous. Total, 109.

2. *Cholera.*—The diagnosis was almost invariably by the ordinary clinical signs.

Eighty-one cases supposed Cholera were sent to hospital, 3 cases were not Cholera, 1 was Dysentery (recovered) 2 were Choleraic Diarrhoea (died).

Of the 78 left 8 died on the way to hospital.

Of the 70 left 30 recovered and 40 died. Mortality 56.7 per cent.

The period covered by the admissions was from the 1st May to the 2nd December.

Number of cases sent during May, 57; June, 16; July, nil; August, 1; September, 1; October, 1; November, 1; December, 1. Total, 78.

All were Chinese except 3 Klings. All were males except 1 Kling.

*Treatment.*—Eucalyptus oil again gave one a favourable impression. It must be remembered that a good many cases had been ill for some days on arrival.

3. *Bubonic Plague.*—Three cases were sent to hospital. One died on the way. Two cases were admitted, both died within 24 hours.

## Leper Asylum.

## MALE.

Remained.	Admitted.	Total.	Transferred.	Absconded.	Died.
12	80	92	52	7	18

To prevent the Lepers absconding in the future alterations are being made.

## FEMALE.

Remained.	Admitted.	Total.	Transferred.	Absconded.	Died.
20	5	25	...	1	4

The patient absconded by climbing up a tree near the wall. All the trees are now cut down.

The female lepers have to live their lives in the camp which is 80 feet long by 70 feet wide, surrounded by a high wall; they appear quite happy.

## The Lunatic Asylum.

REPORT BY DR. W. G. ELLIS, *Medical Superintendent.*

1. The average daily number of patients resident during the year was 209 (males 160, females 49), an increase of 30 males and 5 females as compared with the previous year.

2. On the 31st December, 1902, there remained 179 patients (males 133, females 46). There were admitted in 1903—males 191, females 30, making the total treated 324 males and 76 females. The maximum and minimum numbers in the asylum on any one day of the year were respectively 235 and 179.

3. There were 11 lunatic criminals and one criminal lunatic under treatment on 31st December 1902; 9 lunatic criminals and 1 criminal lunatic were admitted during the year, making a total of 22 criminals treated; of these 4 were discharged recovered, 1 was discharged not improved to care of friends, 3 died, and 12 lunatic criminals and 2 criminal lunatics remain under treatment.

4. In June the female patients were brought up from the sea-side hospital at Pasir Panjang to Sepoy Lines; within a week 5 cases of cholera, 3 being fatal, occurred. The patients were at once transferred back to Pasir Panjang and the epidemic ceased. This being the second occasion of a like occurrence I do not intend bringing them up again. There can be little doubt that the female side of the Sepoy Lines asylum is a pest hole of both cholera and beri-beri, and its site and construction is such that but little can be done to improve its insanitary condition. There are only two cases of sickness among the 52 female patients at Pasir Panjang, one a case of pulmonary tuberculosis, admitted with the disease, the other a case of syphilitic endoarteritis admitted in a paralytic condition. My old medical journals show that when the females were in residence at Sepoy Lines we were never without from 30 to 40 per cent sick.

5. Evidence of past or present venereal disease in the admissions, as in previous years, is common. Twenty per cent suffered from syphilis compared with 13.48 per cent of the admissions for 1896, 13.51 for 1897, 16.14 for 1898, 13.85 for 1889, 17.64 for 1900, 20.57 for 1901, and 23.2 for 1902. Of the 1903 admissions, syphilis was the undoubted cause of the insanity in 7 males and 2 females. It must not be overlooked that syphilis may co-exist with any form of insanity and have nothing to do with it as a causative element.

6. Beri-beri, endemic in this asylum since its opening in 1887, shows signs of dying out. Only 18 cases have occurred amongst the patients during 1903, compared

with 99 in 1902, 102 in 1901, 153 in 1900, 121 in 1899, and 155 in 1898. Of these 18, all have recovered. Three patients, admitted in an advanced stage of the disease, died shortly after admission. A Table at the end of this report is instructive in shewing the improvement in the recovery rate from the disease after the opening of the sea-side ward at Pasir Panjang in 1900, and then later, the decrease in the number of patients attacked. Allowance must be made in the figures for 1903 for the three patients admitted to the asylum with the disease, who died, and have to be included in the Table. When advocating these sea-side wards in 1899 I wrote:—"My only apprehension is that possibly in time the ward and its surrounding compound may become "also saturated with the poison and so lose its powers for good." Since then other two wards have been built, the disease appears to be quite stamped out from the female side, and the few cases that occur on the male side at Sepoy Lines rapidly recover when sent to the sea-side and do not relapse upon return as formerly they so often did. In my report for 1902, I gave some of the details of the plan of attacking the disease by thorough disinfection of all personal linen, bedding, furniture, crockery, wards, compounds, etc., and to this I imagine our success is mostly, if not entirely, due.

7. There were 9 escapes during the year, 3 of whom were women. It has been said that "There is no art whatever in absolute prevention of all escape, but there is "a large scope of art in providing that the right patients only shall have a chance." The most of our patients are allowed considerable liberty and as this is so material to the comfort and health of the high majority, the occurrence of a few escapes must not be allowed to cause one to put into force a system of surveillance which would be irksome to so many. Nearly all those escaping were convalescent, and the others were quiet and harmless; none have been returned to us as yet, showing they were able to hold their own in the world at large.

8. The Tables at the end of this report are, as heretofore, some of those recommended by the English Lunacy Commissioners.

9. *Admissions.*—One hundred and ninety-one males and thirty females have been admitted during the year; of these 15 males and 3 females had been treated in this asylum before.

10. One hundred and forty-two males and 22 females came from Singapore, 20 males and 7 females from Penang, 7 males from Malacca, 3 males from Province Wellesley, 14 males and 1 female from Negri Sembilan, 1 male from Pahang, 1 male from Labuan, and 3 males from Sandakan.

11. Table XI gives their form of mental disorder.

12. The prevailing type of the insanity in the admissions is, as I noted in 1893, a low form of mania with few acute outbreaks, but little violence (delusions and hallucinations being comparatively rare) with a tendency to rapid recovery or equally rapid change to dementia. Cases of sub-acute melancholia are becoming more frequent and there has been a steady increase in this form of insanity since 1896, when I reported that cases were somewhat rare and never very acute.

13. I have yet to chronicle my first case of general paralysis of the insane in the person of an Asiatic notwithstanding the fact that 3,168 insane Asiatics have passed through this asylum since I first arrived in 1888. This disease is considered by practically all European authorities to be of syphilitic origin; syphilis is even more prevalent here than in Europe, so there can be little doubt that other factors are necessary to initiate the outbreak; whether those factors are anxiety, mental worries and great excesses, as was formerly thought, I cannot say, but in this country there is no cold, but little indulgence amongst natives in alcohol, food and lodgings are cheap, and the least possible clothing is required, so stress is practically unheard of.

14. The physical condition of those admitted was in many instances deplorable. 5 patients died within a week of admission, and 12 died before they had been in residence a month. Table VI gives the length of residence of the recoveries and of the deaths.

15. *Discharges.*—Seventy-seven patients, have been discharged recovered, equal to a recovery rate of 34.84 on the admissions. This is a lower rate than that of the two previous years, the rates for which were hardly likely to be maintained.

16. Seventeen patients were discharged relieved and eleven not relieved to the care of their friends.

17. *Deaths.*—Forty-four males and 11 females died during the year. The percentage of deaths was 26.31 on the average number resident and must be considered good for this Asylum.

18. Table V shows the causes of death together with the age at death.

19. Twenty-six *post mortems* were held and the results recorded.

20. *Industries.*—During the year there have been manufactured 2,211 yards of cloth, which has been cut up and made into 346 pairs of trousers, 561 jackets, 176 sarongs, and 12 dusters; also there have been made 70 strong canvas rugs, 5 canvas combination suits and, from some Calcutta cloth, 240 jackets, 201 trousers and 64 sarongs.

21. The women have again started spinning cotton so we shall shortly commence to weave cotton blankets, a work that has had, unfortunately, to be in abeyance for several years.

22. Nearly 80 per cent of our inmates are usefully employed, every encouragement in the way of small luxuries, such as tobacco, fruit, etc., being given them to this end.

23. It is to be regretted that we have no land available for cultivation. Many of our patients are estate coolies, squatters, and gardeners accustomed to an outdoor life, and though industrial work has its uses, as a curative agent for the insane it falls far short of farm labour.

24. *Staff.*—Assistant Surgeon GIBBS went on leave to Europe in April and was replaced by Mr. PESTANA.

25. Miss WERRY, Matron, returned from leave in May and resumed duty.

26. An European Attendant, long needed, arrived from England in October, and took over charge of the European cottage. I was greatly disappointed that his lunacy experience was so little as I had especially requested that a thoroughly trained man with several years service be sent me.

27. The whole staff have worked well, and we have been singularly free from those small breaches of discipline common to all asylums.

#### LUNATIC ASYLUM.

*Table Giving the Nationalities of Patients in the Asylum on 31st December, 1903.*

	Nationalities.				Male.	Female.	Total.
American	...	...	...	...	2	...	2
Russian Jew	...	...	...	...	1	...	1
Eurasian	...	...	...	...	12	2	14
Armenian Jew	...	...	...	...	1	...	1
Chinese	{ Hokien Teo-Chew Macao Keh Hylam Laichew	...	...	...	38	4	42
		...	...	...	26	9	35
		...	...	...	17	15	32
		...	...	...	25	1	26
		...	...	...	9	...	9
		...	...	...	5	...	5
Malay	...	...	...	...	10	5	15
Javanese	...	...	...	...	6	1	7
Boyanese	...	...	...	...	1	...	1
Manila	...	...	...	...	2	...	2
Arab	...	...	...	...	3	...	3
Siamese	...	...	...	...	...	2	2
Tamil	...	...	...	...	15	8	23
Bengali	...	...	...	...	4	...	4
Sikh	...	...	...	...	1	...	1
Buggis	...	...	...	...	1	...	1
Japanese	...	...	...	...	...	5	5
	Total				179	52	231

LUNATIC ASYLUM.

Beri-beri.

Year.	January	February	March	April	May	June	July	August	September	October	November	December	Per-cent-age of total Deaths on Resi-dent.
	Average Number Resi-dent.												
1896	...	...	...	...	...	...	...	...	...	...	...	...	36.48
1897	...	...	...	...	...	...	...	...	...	...	...	...	35.52
1898	...	...	...	...	...	...	...	...	...	...	...	...	45.67
1899	...	...	...	...	...	...	...	...	...	...	...	...	35.33
1900	...	...	...	...	...	...	...	...	...	...	...	...	68.30
1901	...	...	...	...	...	...	...	...	...	...	...	...	33.33
1902	...	...	...	...	...	...	...	...	...	...	...	...	34.15
1903	...	...	...	...	...	...	...	...	...	...	...	...	24.14
													26.31
													14.28
													5.45

New Cases of Beri-beri and Months in which they Occurred.

Year.	January	February	March	April	May	June	July	August	September	October	November	December	Total.
1898	19	4	14	21	18	5	16	19	12	13	7	5	155
1899	8	6	8	14	21	4	5	5	13	13	4	8	121
1900	21	11	20	14	17	30	10	8	11	7	3	10	153
1901	11	15	10	5	9	12	7	3	6	6	6	7	102
1902	14	14	11	3	2	2	5	5	19	6	6	8	99
1903	8	1	1	1	1	1	1	1	1	1	1	1	21

\* Three of these were admitted to the Asylum with the disease and died shortly afterwards.

TABLE I.

## LUNATIC ASYLUM.

*Table Shewing the Admissions, Discharges, and Deaths During the Year 1903.*

—	Male.	Female.	Total.	Male.	Female.	Total.
In the Asylum on 1st January, 1903 ...				133	46	179
Cases admitted :—						
First Admissions ...	176	27	203			
Not First Admissions	15	3	18	191	30	221
Total Cases under Care During Year ...				324	76	400
Cases Discharged :—						
Recovered ...	70	7	77			
Relieved ...	15	2	17			
Not Relieved ...	10	1	11			
Absconded ...	6	3	9			
Died ...	44	11	55			
Total Cases Discharged and Died During Year				145	24	169
Remaining in the Asylum on 31st December, 1903				179	52	231
Average Number Resident During Year ...				160	49.18	209.19

TABLE II.

## LUNATIC ASYLUM.

*Table Shewing the Admissions, Re-admissions, Discharges and Deaths from 31st December, 1888, to 31st December, 1903.*

—	Male.	Female.	Total.	Male.	Female.	Total.
Remaining on the 31st December, 1888 ...				176	32	208
Persons Admitted during the Period ...				2,255	366	2,621
Re-admissions ...				237	50	287
Total Cases Treated				2,668	448	3,116
Discharged Cases :—						
Recovered ...	1,030	141	1,171			
Relieved ...	245	52	297			
Not Improved ...	78	28	106			
Absconded ...	70	10	80			
Died ...	1,066	165	1,231			
Total Cases Discharged and Died Since the 31st of December, 1888 ...				2,489	396	2,885
Remaining in Asylum on 31st December, 1903 ...				179	52	231

TABLE III.

# LUNATIC ASYLUM.

*Table Shewing the Admissions, Discharges and Deaths, with the Mean Annual Mortality and Proportion of Recoveries per cent on the Admissions for the Years 1886 to 1903 Inclusive.*

YEAR.	Admitted.		Discharged.		Recovered.		Relieved.		Not Improved.		Absconded.		Died.		Remaining on 31st December of each Year.		Average Number Resident.		Per-cent of Recoveries on Admissions.		Per-cent of Deaths on the Average Number Resident.		
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.			
1886	164	...	17	190	35	44	5	2	7	2	1	3	2	1	37	73	4	77	169	192	23	176	
1887	173	...	23	176	35	73	13	4	17	7	4	1	5	1	29	84	8	92	176	208	29	210	
1888	153	...	24	210	67	67	94	23	1	24	4	1	5	1	4	74	6	80	196	202	35	237	
1889	186	...	30	254	87	7	9	23	1	15	1	1	5	1	1	145	11	156	157	186	41	227	
1890	224	...	30	192	61	13	74	12	3	15	3	2	5	6	6	76	11	87	161	191	47	200	
1891	162	...	30	192	61	14	85	15	4	19	6	1	7	5	2	43	14	57	179	170	44	214	
1892	158	...	33	217	65	7	65	7	8	5	13	6	5	11	1	1	43	14	53	293	205	49	254
1893	184	...	33	198	69	11	80	21	4	25	4	3	7	3	3	48	1	2	43	53	48	296	
1894	169	...	29	198	69	11	80	21	4	25	4	3	7	3	3	73	16	89	239	244	52	287	
1895	173	...	34	207	70	9	79	45	10	55	9	3	12	9	1	10	99	13	112	180	46	226	
1896	202	...	23	230	85	16	102	9	2	9	2	1	3	3	3	79	6	85	205	205	49	254	
1897	122	...	26	148	62	9	71	18	7	25	2	2	2	2	2	72	9	81	171	50	221	181	
1898	137	...	24	161	61	7	68	16	3	19	17	6	23	4	4	85	10	95	125	48	52	208	
1899	130	...	32	162	51	12	63	12	3	17	4	1	5	7	7	56	9	65	123	55	178	131	
1900	157	...	30	187	54	5	59	9	1	14	3	1	4	4	4	93	30	123	118	47	165	128	
1901	154	...	21	175	74	10	84	18	2	20	1	1	2	2	2	46	10	56	127	46	172	118	
1902	143	...	16	159	82	8	90	11	1	12	1	1	2	5	1	38	4	42	133	46	179	130	
1903	191	...	22	221	70	7	15	15	3	17	17	1	2	6	6	4	42	11	55	52	231	160	

TABLE IV.

## LUNATIC ASYLUM.

*Table Shewing the History of the Annual Admissions Since 1889, with the Discharges and Deaths, and the Numbers of Each Year Remaining on 31st December of the Year Reported on.*

TABLE V.

LUNATIC ASYLUM.  
*Showing the Causes of Deaths During the Year 1903, Together with the Ages at Death.*

TABLE VI.  
LUNATIC ASYLUM.

*Table Shewing the Length of Residence of those Discharged Recovered and of those who Died, During the Year 1903.*

Length of Residence.	Recovered.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.
Under one month ... ...	5	...	5	10	2	12
From one to three months ... ...	26	1	27	7	2	9
Do. three to six months ... ...	20	4	24	6	...	6
Do. six to nine months ... ...	10	...	10	6	...	6
Do. nine to twelve months ... ...	6	...	6	2	...	2
Do. one to two years ... ...	3	2	5	7	3	10
Do. two to three years ... ...	...	...	...	1	1	2
Do. three to five years ... ...	...	...	...	3	...	3
Do. five to seven years ... ...	...	...	...	...	2	2
Do. seven to ten years ... ...	...	...	...	...	...	...
Do. ten to fifteen years ... ...	...	...	...	1	1	2
Do. fifteen to twenty-five years ... ...	...	...	...	1	...	1
Total ... ...	70	7	77	44	11	55

TABLE X-a.  
LUNATIC ASYLUM.

Table Shewing the Probable Causes, Apparent or Assigned, of the Disorders in the Admissions, Discharges and Deaths of the Year 1903.

CAUSES.	ADMISSIONS.											
	Number of Instances in which a Cause was Assigned.											
	Admissions: — Male, 191. Female, 30. Total, 221.			As Predisposing Cause.			As Exciting Cause.			As Predisposing or exciting Cause. †		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends)	...	...	...	3	2	5	...	...	...	3	2	5
Adverse Circumstances (including business anxieties and pecuniary difficulties)	...	...	...	5	...	5	...	...	...	5	...	5
Mental Anxiety and Over Work	...	...	...	2	...	2	...	...	...	2	...	2
Religious Excitement	...	...	...	1	...	1	...	...	...	1	...	1
Love Affairs (including seduction)	...	...	...	2	1	3	...	...	...	2	1	3
Fright and Nervous Shock	...	...	...	...	...	...	...	...	...	...	...	...
<i>Physical.</i>												
Intemperance in Drink	...	...	...	7	...	7	...	...	...	7	...	7
Venerial Disease	...	...	3	3	5	2	7	...	...	8	2	10
Self-abuse	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke	...	...	...	...	...	...	...	...	...	...	...	...
Accident or Injury	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...
Parturition and the Puerperal State	...	...	...	1	1	1	...	...	...	1	1	1
Uterine and Ovarian Disorders	...	...	...	...	...	...	...	...	...	...	...	...
Lactation	...	...	...	...	...	...	...	1	1	...	1	1
Puberty	...	...	...	...	...	...	4	...	4	4	...	4
Epilepsy	...	8	8	...	...	...	...	...	...	8	...	8
Privation and Starvation	...	...	...	...	...	...	...	...	...	...	...	...
Heart Disease	...	...	...	...	...	...	3	1	4	3	1	4
Phthisis	...	...	...	...	...	...	6	1	7	6	1	7
Malarial Fever	...	...	...	6	...	6	...	...	...	6	...	6
Typhoid Fever	...	...	...	2	...	2	...	...	...	2	...	2
Other Bodily Diseases or Disorders	...	14	2	16	...	...	...	...	...	14	2	16
Previous Attacks	...	16	2	18	...	...	...	...	...	16	2	18
Old Age	...	7	2	9	...	...	...	...	...	7	2	9
Opium Smoking	...	...	...	...	...	...	1	...	1	1	...	1
Hereditary Influences	...	5	1	6	...	...	...	...	...	5	1	6
Congenital Defect	...	...	...	2	...	2	...	...	...	2	...	2
Indian Hemp Smoking	...	...	...	2	...	2	...	...	...	2	...	2
Unknown	...	...	...	...	...	...	...	...	...	105	18	123

\* Some of the admissions are credited with more than one cause, therefore, the sum of the "known" and "unknown" causes exceeds that of the admissions. † Where these could not be distinguished.

TABLE X-b.

## LUNATIC ASYLUM.

Table Shewing the Probable Causes, Apparent or Assigned, of the Disorders, in the Admissions, Discharges and Deaths of the Year 1903—continued.

CAUSES	DISCHARGES.												
	Number of Instances in which a Cause was Assigned.												
	Discharges:—Male, 101. Female, 13. Total, 114.			As Predisposing Cause.			As Exciting Cause.			As Predisposing or Exciting Cause †			Total. *
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Total.
<i>Moral.</i>													
Domestic Troubles including loss of relatives and friends) ... ... ...	...	...	...	1	1	2	...	...	...	1	1	2	
Adverse Circumstances (including business anxieties and pecuniary difficulties) ... ... ...	...	...	...	2	...	2	...	...	...	2	...	2	
Mental Anxiety and Worry and Over Work ... ... ...	...	...	...	4	...	4	...	...	...	4	...	4	
Religious Excitement ... ... ...	...	...	...	1	...	1	...	...	...	1	...	1	
Love Affairs (including seduction) ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Fright and Nervous Shock ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
<i>Physical.</i>													
Intemperance in Drink ... ... ...	...	...	...	9	...	9	...	...	...	9	...	9	
Venereal Disease ... ... ...	...	1	1	5	...	5	...	...	...	6	...	6	
Self-abuse ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Sunstroke ... ... ...	...	...	...	1	...	1	...	...	...	1	...	1	
Accident or Injury ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Pregnancy ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Parturition and the Puerperal State ... ... ...	...	...	...	1	1	2	...	...	...	1	1	2	
Uterine and Ovarian Disorders ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Puberty ... ... ...	...	...	...	...	...	...	2	...	2	...	...	2	
Epilepsy ... ... ...	...	4	4	...	...	...	...	...	...	4	...	4	
Privation and Starvation ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Heart Disease ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Phthisis ... ... ...	...	...	...	...	...	...	2	...	2	...	...	2	
Malarial Fever ... ... ...	...	...	...	6	...	6	...	...	...	6	...	6	
Typhoid Fever ... ... ...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Bodily Diseases or Disorders ... 6 2 8	6	2	8	...	...	...	...	...	...	6	2	8	
Previous Attacks ... 15 ... 15	15	...	15	...	...	...	...	...	...	15	...	15	
Old Age ... 3 1 4	3	1	4	...	...	...	...	...	...	3	1	4	
Opium Smoking Morphia Habit) ... ... ...	...	...	...	...	...	...	1	...	1	...	...	1	
Hereditary Influences ... ... ...	...	2	2	...	...	...	...	...	...	2	...	2	
Congenital Defect ... ... ...	...	...	...	2	...	2	...	...	...	2	...	2	
Indian Hemp Smoking ... ... ...	...	...	...	5	...	5	...	...	...	5	...	5	
Unknown ... ... ...	...	...	...	...	...	...	...	...	...	46	8	54	

\* Some of the discharges are credited with more than one cause, therefore the sum of the "known" and "unknown" causes exceeds that of the discharges. † Where these could not be distinguished.

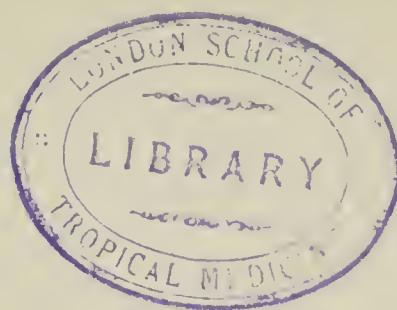


TABLE X-c.

## LUNATIC ASYLUM.

*Shewing the Probable Causes, Apparent or Assigned, of the Disorders, in the Admissions, Discharges and Deaths of the Year 1903—continued.*

CAUSES.	Deaths.											
	Number of Instances in which a Cause was Assigned.						Deaths:—Male, 44      Female, 55      Total.					
	As Predisposing Cause.			As Exciting Cause.			As Predisposing or Exciting Cause.†			Total. *		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
<i>Moral.</i>												
Domestic Troubles (including loss of relatives and friends) ...	...	...	...	...	...	...	...	...	...	...	...	...
Adverse Circumstances (including business anxieties and pecuniary difficulties) ...	1	...	1	...	...	...	...	...	...	1	...	1
Mental Anxiety and Worry and Over Work ...	...	...	...	...	...	...	...	...	...	...	...	...
Religious Excitement ...	...	...	...	...	...	...	...	...	...	...	...	...
Love Affairs (including seduction) ...	...	...	...	...	...	...	...	...	...	...	...	...
Fright and Nervous Shock ...	...	...	...	...	...	...	...	...	...	...	...	...
<i>Physical.</i>												
Intemperance in Drink ...	...	...	...	...	1	1	...	...	...	...	1	1
Venereal Disease ...	...	1	1	3	1	4	...	...	4	1	1	5
Self-abuse ...	...	...	...	...	...	...	...	...	...	...	...	...
Sunstroke ...	...	...	...	...	...	...	...	...	...	...	...	...
Accident or Injury ...	...	...	...	...	...	...	...	...	...	...	...	...
Pregnancy ...	...	...	...	...	...	...	...	...	...	...	...	...
Parturition and the Puerperal State ...	...	...	...	...	...	...	...	...	...	...	...	...
Uterine and Ovarian Disorders ...	...	...	...	...	...	...	...	...	...	...	...	...
Puberty ...	...	...	...	...	...	...	...	...	...	...	...	...
Epilepsy ...	3	3	3	...	...	...	...	...	3	3	3	3
Privation and Starvation ...	...	...	...	...	...	...	...	...	...	...	...	...
Heart Disease ...	1	1	2	...	...	...	...	...	1	1	1	2
Phthisis ...	...	...	...	...	7	1	8	7	1	8	7	8
Malarial Fever ...	...	...	...	1	1	1	...	...	1	1	1	1
Other Bodily Diseases or Disorders ...	6	6	6	...	...	...	...	...	6	6	6	6
Previous Attacks ...	2	1	3	...	...	...	...	...	2	1	2	3
Old Age ...	4	4	4	...	...	...	...	...	4	4	4	4
Opium Smoking ...	...	...	...	...	...	...	...	...	...	...	...	...
Hereditary Influences ...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Defect ...	...	...	...	...	...	...	...	...	...	...	...	...
Indian Hemp Smoking ...	...	...	...	...	...	...	...	...	...	...	...	...
Unknown ...	...	...	...	...	...	...	...	...	18	6	24	24

\* Some of the deaths are credited with more than one cause, therefore, the sum of the "known" and "unknown" causes exceeds that of the deaths.      † Where these could not be distinguished.

TABLE XI.

Showing the Form of Mental Disorder on Admission in the Admissions, Recoveries and Deaths, of the Year 1903, and the Form of Mental Disorder of the Inmates on 31st December, 1903.

Form of Mental Disorder.	Admissions.			Recoveries.			Deaths.			Remaining in Asylum.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Congenital or Infantile Deficiency with Epilepsy	1	1	2	1	1	2	1	1	2	1	1	2
Do. without Epilepsy	3	4	7	6	6	12	2	2	4	3	3	6
Epilepsy acquired	...	...	...	...	...	...	...	...	...	7	7	8
General Paralysis of the Insane	...	...	...	...	...	...	...	...	...	1	1	1
Mania, Acute	...	...	...	98	14	112	52	6	58	19	19	34
Do. Acute Delirious	...	...	...	1	1	2	14	1	15	1	1	157
Do. Chronic	...	...	...	12	2	14	14	1	15	3	3	140
Do. Recurrent	...	...	...	1	1	2	2	2	4	4	4	2
Do. A. Potu	...	...	...	5	1	6	3	3	6	2	2	2
Do. Puerperal	...	...	...	1	1	2	1	1	2	1	1	2
Do. Senile	...	...	...	9	2	11	3	3	6	4	4	2
Melancholia, Acute	...	...	...	22	5	27	4	1	5	1	1	2
Do. Chronic	...	...	...	2	1	3	3	1	4	1	1	4
Do. Recurrent	...	...	...	...	...	...	...	...	...	5	5	8
Do. A. Potu	...	...	...	...	...	...	...	...	...	...	...	...
Do. Puerperal	...	...	...	...	...	...	...	...	...	...	...	...
Do. Senile	...	...	...	...	...	...	...	...	...	1	1	1
Dementia, Primary	...	...	...	1	1	2	23	1	25	4	4	4
Do. Secondary	...	...	...	22	1	23	1	1	24	72	72	90
Do. Senile	...	...	...	1	1	2	1	1	2	1	1	1
Do. Organic	...	...	...	1	1	2	1	1	2	1	1	1
Not Insane on Admission	...	...	...	3	3	6	3	3	6	1	1	1
Convalescent	...	...	...	3	3	6	3	3	6	2	2	5
Delirium from Fever	...	...	...	3	3	6	3	3	6	3	3	5
Total	191	30	221	70	7	77	44	11	55	179	179	231

TABLE XII.

## LUNATIC ASYLUM.

*Showing Occupation of Admissions.*

Occupation.	Male.	Female.	Total.	Occupation.	Male.	Female.	Total.
A. B., H.M'S. Navy	...	1	1	Brought forward ...	74	1	75
Actors	...	2	2	Forest Officer	...	1	1
				Fruiterers	...	2	2
Bakers	...	2	2	Gardeners	...	4	4
Beggars	...	3	3	Hawkers	...	3	3
Blacksmith	...	1	1	Housewives	...	12	12
Boarding Officer	...	1	1				
Boatmen	...	10	10				
Cake Seller	...	1	1				
Carpenters	...	3	3				
Chinese Doctor	...	1	1				
Circus Attendant	...	1	1				
Clerks	...	4	4				
Cooks	...	2	2				
Coolies—							
Cargo	...	2	2	Petty Trader	...	1	1
Coal	...	2	2	Pig Rearer	...	2	2
Coffee Estate	...	2	1	Planters	...	9	9
Eating House	...	2	2	Poet	...	1	1
Gambier Estate	...	2	2	Postman	...	1	1
Gambling Farm	...	1	1	Prostitutes	...	7	7
General	...	1	1				
Pineapple Factory	...	1	1				
Sago Factory	...	1	1				
Sand Pit	...	1	1				
Shop	...	4	4				
Tin Mining	...	6	6				
Divers (pearl)	...	2	2				
Distiller	...	1	1				
Domestic	...	1	1				
Draftsman	...	1	1				
Dyer	...	1	1				
Engineer	...	1	1				
Ex-Police Constable	...	1	1				
Ex-Police Lance-Corporal	...	1	1				
Fiddler	...	1	1				
Fishermen	...	5	5				
Food Sellers	...	2	2				
				No Occupation	...	4	6
Carried forward ...	74	1	75	Total ...	191	30	221

### Maternity Hospital.

REPORT BY MR. C. V. NORRIS, *Assistant Surgeon in Charge.*

The following Table shows the work done during the year.

Nation.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.
European	...	22	22	21	...	1
Eurasian	...	13	13	13	...	...
Chinese	...	7	7	7	...	...
Natives of India	...	38	38	35	...	3
Jewesses	...	5	5	5	...	...
Total	...	85	85	81	...	4

2. This shews an increase of 11 patients over those of 1902.
3. The average daily sick was 2·36
4. Of the 77 labours in hospital 66 were natural, 4 were breech, 2 were shoulder, 2 were complex twins, 1 was difficult, 2 were abortions.  
In both the shoulder presentations decapitation was resorted to: in the difficult case, owing to a contracted pelvis, cephalotripsy was performed.
5. There were 8 still-births and one survived its birth a few minutes.
6. The fees amounted to \$1,400.60.
7. The expenditure, exclusive of Staff, was \$1,100.42.

### APPENDIX B.

#### PENANG.

REPORT BY DR. T. C. MUGLISTON, *Colonial Surgeon.*

1. The public health of the Island of Penang for 1903, regarded from the actual mortality, *i.e.*, the total number of deaths registered, and by the death-rate per mille of the estimated population, was better than that during the two previous years, 1902 and 1901.

2. The total number of deaths registered was 4,988, as compared with 5,787 for the previous year; of these 3,793 were registered within municipal limits and 1,195 in country districts. On an estimated population of 130,059 this gives a crude mortality of 38·35 per mille. Eliminating the deaths at Pulau Jerejak (Leper Asylum, 84; Quarantine Station, 9) and of those dying shortly after arrival in the Colony, 225 (town 213, country 12) the corrected death-rate for the whole Island comes to 35·90 per mille. As regards distribution of deaths, the corrected death-rate comes to 37·14 per mille of the population within municipal limits and 32·36 per mille of the rural population.

3. Stringent measures are being taken to prevent the landing of paupers, and immigrants arriving here, sickly, shattered, and broken-down in health. Such immigrants (it is not likely that they can do any work) only swell the admissions into the Pauper Hospital and increase the death-rate.

4. Disease in epidemic form was absent. Small-pox, a continuation of the outbreak of the previous year, was prevalent during the first half of the year and almost completely disappeared by the month of June. Two hundred and twenty-seven (227) cases with 57 deaths, including 20, either found dead or reported after death occurred: of these 152 were reported in the town, 66 in the country and 9 were imported. Of this total 119 cases were isolated in the Government Quarantine Camp--Jelutong. Sixteen cases (14 Eurasians and 2 Europeans) were treated in the European Small-pox Hospital and all recovered.

*Chicken-pox and Measles.*—Forty-eight cases (town 38, country 3, imported 7) of the former with no deaths and 4 (town 3, imported 1) of the latter were reported.

*Cholera.*—There were 22 cases with 14 deaths. According to nationalities 21 of these were Chinese and Bengali. All cases were imported. Three occurred in the town and were recent arrivals from Singapore. Two of these cases were from the *Hong Heng* and *Hap Wo* Chinese *sinkeh* depôts, in Chulia Street and the third from a lodging house in Acheen Street Ghaut. Immediate precautionary measures were taken to prevent the spread of the disease. Six cases were detected on vessels arriving here, the remaining 13 occurred in Pulau Jerejak Quarantine Station.

*Plague.*—No case was reported. The imported case, treated at the Quarantine Camp, is referred to under "Quarantine."

*Enteric Fever.*—One hundred and forty deaths were reported. According to hospital statistics there were 18 admissions with 6 deaths.

5. The chart accompanying this report, shows graphically the actual deaths, compared with those of the corresponding weeks of the previous years.

### Quarantine Camp.

REPORT BY DR. T. C. MUGLISTON, *Colonial Surgeon.*

There were 188 admissions during the year, for the following diseases:—

Small-pox, 119; Chicken-pox, 45; Measles, 4; Acute Diarrhœa, 1; Cholera, 3; Pneumonia, 2; Pneumonic Plague, 1; Remittent Fever, 3; Bubo, 2; Pelvic Peritonitis, 1; Observation 5, etc.

2. One hundred and seventeen of the total admitted either came themselves or were voluntarily brought to the Camp by relations or friends. The deaths numbered 34, giving a per-cent of 17.34 to total treated. The greatest number of patients in the Camp at any one time was 28.

3. With regard to small-pox, which constituted the bulk of admissions 119, 38 bore marks of previous vaccination, 81 were unvaccinated. All the deaths from small-pox were amongst the unvaccinated patients.

4. According to nationalities and months the incidence for small-pox was as follows:—

Nationalities.	No. of Admissions.	Months.	No. of Admissions.
Hindu ...	58	January	24
Mahomedan (Klings) ...	17	February	23
Chinese ...	16	March	23
Malays ...	11	April	20
Javanese ...	3	May	11
Siamese ...	2	June	5
Eurasian ...	1	July	3
Greek ...	1	August	2
Goanese ...	2	September	2
Bengalis ...	4	October	6
Japanese ...	1	November	...
Arab ...	3	December	...
	119		119

5. The age incidence for small-pox was as follows:—

Up to 10 years, 29; 10 to 20 years, 30; Over 20 years, 60.

6. From the above it will be seen that the large majority of small-pox cases were Kling adults, who in most cases had not been vaccinated before coming to the Straits.

7. The three cases of cholera occurred in May and June; two amongst Chinese *sinkehs* from the *Hong Heng* and *Hop Wo* depots and the third, also an immigrant, in a house in Acheen Street. That from Pneumonic Plague was in a Lascar from China on board the s.s. *Cheang Chew*; two of the former and the latter proved fatal within 24 hours.

8. The flooring and walls of all the wards were renewed, wards 10 and 11 were re-erected, and the roof of the main ward was re-ataped during the year.

### General Hospital.

REPORT BY DR. T. H. JAMIESON, *Acting Colonial Surgeon Resident.*

1. *Buildings.*—A space adjoining the dispensary was roofed over and converted into two rooms, one being a casualty room, and the other for keeping patients property. The wards and out-houses were colour-washed and otherwise maintained in a state of repair.

2. *Staff.*—Dr. FREER proceeded to Europe on leave on April 5th and I took over charge from him. The sisters of the Convent left in May and were replaced by four trained nurses from home and three probationers engaged locally. Assistant Surgeon Rodriguez has done duty throughout the year, and so have Dressers Gasper and Aeria.

3. *Work Done.*—(See Tables A and B.)

4. The total number of cases treated was 1,866 and the number of deaths 87, as compared with 1,972 and 116 respectively for the previous year.

5. The average daily sick was 54·57 and the per-cent of deaths 4·66.

6. *European Wards.*—There were 173 admissions in all, of whom 24 were females. The chief diseases among them were:—Malarial Fevers, 25; Venereal Diseases, 12; Bowel Complaints, 15; Enteric Fever, 5; Liver Complaints, 5; Lung Complaints, 10. The deaths were six in number, from the following causes:—Strangulated Hernia, 1; Hemiplegia, 1; Delirium Tremens, 1; Cerebral Haemorrhage, 1; Valvular Disease of Heart, 2; of these two died within 24 hours of admission.

7. *Native Wards (excluding Police).*—The admissions numbered 1,145 (female 72), the deaths 81. The most prevalent diseases were:—Malarial Fevers, 121; Venereal Diseases, 52; Bowel Complaints, 43; Insanity, 95; Typhoid Fever, 10; Lung Complaints, 26; Rheumatism, 19; Conjunctivitis, 35; Injuries, 369.

8. Eighty-six cases were sent for observation, of whom 25 were transferred to the Lunatic Asylum, Singapore.

9. *Native Police (including Malay States Guides).*—The admissions numbered 495, against 576 for the previous year, and were made up as under:—Sikhs, 229; Malays, 245; Hindus and others, 21.

10. The principal diseases among them were:—Malarial Fever, 111; Venereal Disease, 23; Diarrhoea and Dysentery, 13; Bronchitis, 22; Dyspepsia and Colic, 24; Ulcers and Boot-bite, 72. There were no deaths.

11. Two hundred and thirty-two recruits were sent for examination, 143 were passed and 89 rejected.

12. Thirteen men were boarded unfit for further service.

13. *Medico-legal.*—Seventy bodies were sent up for *post mortem* examination and inquest.

14. Six hundred and ninety-four cases were sent for examination or admission by the Police.

15. *Operations.*—The principal operations performed included: Thoracotomy with Excision of Ribs for Empyema, 2 (1 died); For Abscess Lung, 1; Radical Cure Hernia, 1; for Strangulated Hernia, 2 (2 died); for Liver Abscess, 2 (1 died); Suprapubic Lithotomy, 2; External Urethrotomy, 1; for Ununited Fracture, 1; Amputation Leg, 1; Removal of Tumour, 4. In addition there were several minor operations.

TABLE A.

*Table Shewing the Admissions, Daily Average and Per-cent of Deaths in the Central Hospital, Penang.*

1903.	Remaining 31st December, 1902.		Total Treated.	Discharged.	Transferred.	Absconded.	Died.	Remaining 31st December, 1903.		Average Daily Sick.	Per-cent of Deaths to Total Treated.	Died within 24 hours.
	Admitted, 1903.	Remaining 31st December, 1902.						Average Daily Sick.	Per-cent of Deaths to Total Treated.			
Europeans	...	4	173	177	164	...	6	7	5.61	3.38	2	
Natives	...	38	1,145	1,183	1,022	25	9	81	32	35.92	6.84	18
Native Police	...	11	95	506	477	...	5	...	13	13.04	...	...
Total	...	53	1,813	1,866	1,663	25	14	87	52	54.57	4.66	20

### Prison Hospital.

REPORT BY Dr. T. C. MUGLISLTON, *Colonial Surgeon.*

1. During the year there were 3,674 admissions into prison, as against 3,534 for 1902; the average daily population being 314.65.

2. The admissions to hospital, excluding those detained under 48 hours for trivial complaints or observation, numbered 96, giving an average daily sick of 4.45, and a daily sick-rate of 1.41 per cent of the prison strength.

3. There were 7 deaths in the prison during the year, which is equivalent to a mortality of 7.29 per cent of those admitted to hospital and 1.90 per mille of the admissions to prison.

4. The 7 deaths were due to the following causes:—Small-pox, 1; Remittent Fever, 1; Debility, 3; Tubercular Phthisis, 1; Chronic Diarrhoea, 1.

Of the total admissions to the prison 155 bore traces of, or were actually suffering from, venereal disease; 56 prisoners showed the marks of a course of morphia injections, and 42 were confirmed opium smokers.

5. Vaccination of all prisoners who had not been previously vaccinated or re-vaccinated, or who bore no marks of a previous attack of small-pox was performed this year on 971, with a per-cent of 80.06 of successful cases to total vaccinated.

Vaccine Lymph from Saigon was used in all cases.

### Pauper Hospital.

REPORT BY Dr. T. H. JAMESON, *Acting Colonial Surgeon Resident.*

1. *Buildings and Grounds.*—Two new Dresser's quarters were built during the year, bringing the total up to eight. An incinerator has been erected behind the shed next to the mortuary. The whole of the hospital buildings except the Female and Leper Ward have been painted grey instead of red during year.

2. I took over charge from Dr. FREER on the 5th of April, 1903. There have been considerable changes among the Dressers; some resigned to better their prospects, while one was dismissed the service after being convicted before a Magistrate for theft of gold earrings from a dead patient.

3. *Work Done.*—The average daily sick was 364.59. The admissions were

more than in the previous year, being 3,622, or 91 more than 1902, and these, with 364 remaining at the end of the previous year, give a total of 3,986.

4. One hundred and forty females were admitted during the year, and these with 23 patients remaining in December, 1902, make a total of 163.

5. There were 708 deaths during the year, representing a mortality of 17.76. This rather high death-rate is due chiefly to the large number of admissions from diarrhoea and phthisis, most of whom were brought to hospital in a moribund condition.

Of the above deaths 73 occurred within 24 hours from the time of admission.

6. Table A shows the admissions and deaths from the principal diseases for the past four years. It will be noticed that the admissions for remittent fever are very much fewer than in the previous three years. This is due to the fact that we are now able by microscopical examination of the blood and by Widal's reaction to differentiate and accurately diagnose the various types of fever.

7. The Kling rice treatment which was begun in September, 1901, by Dr. W. H. FRY, is still being continued for beri-beri cases in the same proportion as last year, half of the admissions being placed on Kling and the other half on Chinese rice.

There were 234 admissions for beri-beri, with 69 deaths, giving a per-cent of 24.40 on Kling diets and 25.67 on Chinese diets.

Of the above deaths 10 died within 24 hours of admission.

8. The admissions and deaths of different nationalities for beri-beri, together with the rainfall for each month of the year are as per attached Table B.

9. Seventy-one lepers were admitted during the year, of whom 43 males were transferred to Pulau Jerejak and 4 females to the Female Leper Ward.

10. *Operations.*—The following chief operations were performed during the year:—

Amputation Finger, 1; Amputation Thigh, 3; Laparotomy for Cirrhosis Liver, 1; Hæmatocoele, 1; Fractured Patella 1; Cataract, 3; and 1 removal of Urethral Calculi. Of these 3 died, 2 from Amputation Thigh (shock and debility) and one from Laparotomy (Peritonitis).

TABLE A.

*Table Shewing Admissions and Deaths from the Principal Diseases for the Past Four Years, Pauper Hospital, Penang.*

Diseases.	1900.			1901.			1902.			1903.		
	Cases Treated.	Deaths.	Per-cent.									
Remittent Fever ...	88	43	48.86	135	68	50.37	62	39	62.90	30	24	80.00
Beri-beri ...	406	98	24.13	424	134	31.60	382	121	31.67	275	69	25.09
Dysentery ...	248	105	42.33	138	56	40.57	101	56	55.44	91	40	43.95
Diarrhoea ...	247	142	57.48	431	219	50.81	481	250	51.97	408	191	46.81
Debility ...	133	43	32.33	246	63	25.60	168	79	47.02	235	108	45.95
Tub. Phthisis ...	175	111	63.42	158	95	60.12	234	119	47.00	205	115	56.09
Anæmia ...	230	111	48.26	210	54	25.71	249	5	3.35	113	23	20.35
Secondary Syphilis	442	55	12.66	567	38	6.70	507	32	6.31	474	26	5.48
Total Cases Treated and Deaths ...	3,847	890	23.3	4,415	839	19.00	4,055	814	20.07	3,986	708	17.76

TABLE B.

Table Shewing the Admissions and Deaths, Pauper Hospital, Penang, for Beri-beri for the Year 1903.

Nationalities.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total.		
	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	Admisi.	Deaths.	
Chinese	...	17	5	9	5	20	4	14	5	12	3	16	1	18	8	14	7	10	3	21	4	34	12	30	6	215	63
Klings	...	4	2	...	1	4	1	2	...	...	...	2	...	...	1	1	3	...	...	2	1	1	...	...	19	6	
Rainfall	...	4.84	3.56	6.89	3.2	5.43	7.82	8.38	10.27	6.51	13.43	24.21	14.70	20.01	13.43	10.27	6.51	13.43	10.27	6.51	13.43	10.27	6.51	13.43	10.27	6.51	

### European Small-pox Hospital, Penang.

REPORT BY DR. T. C. MUGLISTON, *Colonial Surgeon.*

1. There were no additions or alterations to the buildings.
2. Sixteen cases of small-pox and one of chicken-pox were admitted.
3. Three families in town constituted nearly the whole of those admitted to this hospital for treatment, and two lads came from the Brothers' School.
4. None of these cases proved fatal.

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### Balik Pulau Hospital.

REPORT BY DR. T. H. JAMIESON, *Acting Colonial Surgeon Resident.*

1. The various hospital buildings have been painted and whitewashed during the year and several minor repairs to woodwork carried out.

The hospital grounds have been well kept and looked after. The ground adjoining Ward No. III appears to be very low and becomes damp and water-logged during the rain.

Wire fencing around the hospital has been put up.

2. *Staff.*—Dresser GANGATHIRAM was away on three months' leave during the year and was relieved by Dresser MATHURAM.

3. *Work Done.*—(1). Thirty-five cases remained in hospital from the previous year and 472 cases were admitted during the year, making a total of 507 cases treated in all. The average daily sick was 41.78 and the number of deaths during the year was 54, giving a death-rate 10.65.

(II). The chief diseases treated were:—Ulcer, 92; Venereal Disease, 92; Intermittent Fever, 62; Rheumatism, 45; Diarrhoea, 19; Anæmia, 15; Phagedæna 12; Tubercular Phthisis, 12; Bronchitis, 11; Debility and old age, 15; Pneumonia, 8.

(III). The nationalities of those treated comprised:—Chinese, 322; Klings, 140; Malays, 43; Bengalis, 2, Total 507.

*Public Health.*—The health of the district has been fairly good. During the year there were 30 cases of small-pox reported, with five deaths. These cases were chiefly confined to Permatang Pasir.

*Medico-legal.*—There were six deaths over which inquests were held; three were accidental, two suicidal, and one death from crocodile bite.

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### Lumut Hospital.

REPORT BY DR. T. C. MUGLISTON, *Colonial Surgeon.*

1. *Buildings.*—The General Ward, including Office and Dispensary, has been "damared" and re-taped. The Infectious Ward is to be converted into a Female Ward. Several minor repairs were executed. The grounds have been well kept.

2. *Work Done.*—One hundred and twenty-six cases were admitted during the year, showing an increase of 10 over the previous year. The admissions were chiefly for Malarial Fever, 22; Diseases of the Skin, 22; Diseases of the Respiratory System, 13; Injuries, 13.

3. *Mortality.*—There were 9 deaths during the year. The causes of death being, Intermittent Fever, 1; Remittent Fever, 1; Beri-beri, 2; Debility, 1; Anæmia, 1; Paraplegia, 1; Tubercular Phthisis, 1; and Bright's Disease, 1. The per-cent-age of deaths to total treated was 7.14.

4. *Out-door Dispensary.*—This shows a fair attendance. Five hundred and twenty-six patients were treated, as against 486 the previous year. The fees collected amounted to \$24.60, showing an increase of \$11.05 over the previous year.

5. *Vaccination.*—One hundred and forty-five children were vaccinated during the year, as against 124 in the previous year. There were seven failures and four not seen.

6. *General Health.*—The general health of the district has been good. One case of chicken-pox and one of small-pox were reported. The latter occurred at Lumut on the 19th March and was isolated.

7. The Malay Police Contingent continues to keep satisfactory health. The administration of quinine, as a prophylactic in 10 grain doses on Sundays and Mondays, is still continued. During the year there were two admissions into hospital for Intermittent Fever and one for Anæmia.

### Leper Asylum, Pulau Jerejak.

REPORT BY DR. T. C. MUGLISTON, *Colonial Surgeon.*

1. *Statistics.*—Remained on January 1st, 1903, Colonial, 184; Remained on January 1st, 1903, Perak, 60; Admitted during 1903, Colonial, 119; Admitted during 1903, Perak, 71. Total treated during 1903, 434.

Number of deaths during 1903, Colonial, 57; Perak, 27. Total 84.

Per-cent-age of deaths to total treated 19·35. This is the lowest death-rate recorded in the last 10 years, it being 20·13 per cent in 1903.

2. Sixteen lepers (Colonial, 13; Perak, 3) absconded from the asylum. There were remaining on December 31st, 1903, 334 lepers. Colonial, 233 and Perak, 101.

3. The windows of the hospital ward have been extended down to the floor and a new kitchen built. The new Perak Ward was complete and occupied. Several minor repairs were attended to by the Public Works Department.

### APPENDIX C.

#### PROVINCE WELLESLEY.

REPORT BY DR. W. H. FRY, *Colonial Surgeon.*

1. The estimated population for Province Wellesley for 1903 is 117,078, compared with 116,267 in 1902.

The population was comprised as under:—Europeans, 185; Eurasians, 302; Malays, 68,899; Chinese, 26,847; Indians, 19,765; Others, 1,080.

2. The births numbered 3,813, compared with 3,698 in 1902, being 32·58 per mille of population.

3. The deaths number 3,279, compared with 3,476 in 1902, being 28·01 per mille of population.

4. The number of cases admitted to hospital throughout the Province was 1,469, with 241 deaths.

5. *Zymotic Disease.*—Small-pox was prevalent in the northern part of the Province, in the districts of Permatang Bertam and Permatang Jangose, for the first nine months of the year, these places being within seven miles of each other.

In the south small-pox occurred chiefly in the districts of Sungai Achi and Sungai Star.

The following Table shews the number of cases among vaccinated and unvaccinated persons, with the deaths among each:

	Cases.	Deaths.
Vaccinated Persons	...	...
Unvaccinated Persons	...	...
	Total ... 258	47

The nationalities of those affected comprised:—Malays, 238; Eurasian, 1; Chinese, 10; Hindus, 8; Bengalis, 1.

6. *Sanitation of Butterworth.*—Several insanitary atap houses have been pulled down during the year and brick houses have been or are in course of erection in their place, and provided with drains which flow into the main drain. Rubbish collected by

the carts is now burnt in the hospital incinerator and three more scavengers appointed to collect the same within the village limits.

7. *Staff*.—Dr. KEUN was in charge of the Northern and Central Districts until November 27th, when I returned from leave and assumed duty.

#### General Hospital, Butterworth.

1. *Buildings*.—A new ward, with latrine for same, were completed during the year and is a welcome addition to the existing buildings, most of which are far advanced in age and difficult to keep clean.

2. *Water Supply*.—This is deficient during the day, water from sunrise to sunset can only be obtained from one tap and then only in a very small stream. Seven other taps in the hospital compound are useless during the day, when they are most required. The water is always discoloured and usually very dirty after rain.

3. *Staff*.—Assistant Surgeon MITCHELL was transferred to the Dindings on June 25th, and the hospital has been without an Assistant Surgeon since then; First Grade Dresser DE SILVA has been in charge here from that date; the absence of an Assistant Surgeon, however, has been continually felt as his presence is required not only to supervise the numerous petty details connected with the surveillance of the attendant staff but also to supply a knowledge in the treatment of cases which dressers naturally lack.

4. *Work Done*.—Remained from 1902, 24; Admitted, 577; Discharged, 478; Transferred to Pulau Jerejak, 5 (lepers); Absconded, 7; Died, 77; Remained at close of 1903, 34.

5. Comparison with the past three years is as follows—

	1903.	1902.	1901.
Treated	...	601	566
Deaths	...	77	75

Seven of the Deaths Occurred within 24 hours of Admission.

Number of Males Admitted ...	509, died 69
Do. Females Admitted	68, died 8

6. The chief diseases comprised—Diarrhoea, 53 (with 21 deaths); Ulcer, 52; Anaemia, 39, (with 13 deaths); Fever, 36; Rheumatism, 36; Venereal Disease, 30.

Many of the other diseases, such as Rheumatism and Debility, owe their origin to a venereal cause.

7. The number of operations performed at Butterworth was 13.

8. *Police*.—The number of Police admitted during the year was 58, being 57 Malays and one Kling; Jawi Pekans being included under the head of Malays.

The chief diseases being Intermittent Fever and Minor Ailments.

Some of the Police Stations in the Districts were inspected and reported on during the year.

#### Government District Hospital, Bukit Mertajam.

1. *Buildings*.—New latrines were built during the year and the usual minor repairs and whitewashing effected.

2. Assistant Surgeon WESTERHOUT left for three months leave on December 4th, his place being filled by Assistant Surgeon HOGAN from Sungai Bakap.

3. *Work Done*.—Remained from 1902, 35; Admitted, 567; Discharged, 435; Transferred to Butterworth, 10; Absconded, 12; Deaths, 108; Remained at close of 1903, 37. Average Daily Number of Sick, 45 Males and 55 Females. Percentage of Deaths to total treated, 17.94.

Of the 108 deaths 16 occurred within 24 hours of admission.

4. The chief diseases treated comprised:—Ulcers, 107; Venereal Disease, 56 (with 2 deaths); Beri-beri, 53 (with 21 deaths); Anaemia, 50 (with 22 deaths);

Dysentery and Diarrhoea 45 (with 22 deaths); Rheumatism, 36; Malaria Fever, 28 (with 5 deaths).

As in the case of Butterworth, many of the other diseases owe their origin to a venereal cause.

5. *Police.*—Eight patients were admitted to hospital and 5 treated as outpatients during the year.

*Estate Hospitals.*

1. All the estates with the exception of Jungong Mati shew a falling off in the number of coolies employed, with a consequent diminution in the number of patients to both hospital and the out-door departments.

To shew how great this falling off has been I append the number of coolies employed upon the two principal estates under my charge for the past four years.

*Prye Estate.*

	1900.	1901.	1902.	1903.
Number of Indentured Coolies	738	558	316	141
Do. Free Coolies ...	453	481	453	422
Total ...	1,191	1,039	769	563

*Malakoff Estate.*

	1900.	1901.	1902.	1903.
Number of Indentured Coolies ...	466	598	384	229
Do. Free Coolies ...	59	44	28	86
Total ...	525	642	412	315

*Prai Estate.*

The hospital has been maintained in good condition throughout the year, a new Female Ward was completed and occupied in the spring and is likely to prove of considerable benefit, there being 35 admissions during the year.

The general health of the coolies has been good. The number of admissions to hospital was 214.

The chief diseases comprised:—Diarrhoea, 13; Ulcers, 59; Fever, 35.

*Malakoff Estate.*

The number of cases admitted to hospital during the year was 330, with no deaths.

The more serious cases were transferred to Butterworth hospital.

The chief diseases treated were:—Intermittent Fever, 70; Ulcers, 52; Colic, 23; Diarrhoea, 20; Minor Injuries, 17.

*Jungong Mati Estate.*

Only Chinese labour employed. One hundred and fifty-six patients were admitted to hospital on this estate, 36 being transferred to Bukit Mertajam, there being no deaths. Intermittent Fever, Ophthalmia, Diarrhoea, and Skin Diseases comprised the bulk of the admissions.

*Lee Ah Thye Estate.*

At the close of the year this estate employed 39 Chinese coolies.

There is no hospital on this estate, any cases of sickness being sent to Butterworth.

**Province Wellesley, Southern Division.**

REPORT BY DR. A. H. KEUN, *Colonial Surgeon.*

In the South Province there are one Government Hospital at Sungei Bakap and three Estate Hospitals, *viz*:—Batu Kawan, Caledonia, and Byram.

*The Government District Hospital, Sungei Bakap.*

1. During the past year a few petty repairs were done to the main buildings and out-houses, and the general wards were whitewashed and partly painted. Verandahs were added to the Dressers' quarters. In the Assistant Surgeon's quarters a mosquito room was fitted up, while general repairs were executed in the Colonial Surgeon's quarters.

2. *Water Supply.*—The water supply remains the same as in previous years, and continues good and abundant, *viz*: two wells—(a). In the hospital grounds for drinking and culinary purposes—(b). In a *kampong* on the opposite side of the road for washing purposes.

*This water is pumped into and stored in a cistern adjoining the hospital.*

3. No cases absconded from the hospital during the year.

4. *Work Done.*—On January 1st, 1903, there were 17 cases in hospital; during the year there were 325 admissions, making a total of 342 treated; of these 56 died, giving a per-cent of 16.37 to total treated. The majority of these cases were admitted in a dying condition, having been picked up from the roadside by the Police, and of these six died within 24 hours and eight others died within three days.

The principal diseases treated were:—Wounds of various parts, 50; Ulcers, 31; Diarrhoea, 28; Debility 24; Anæmia, 20; Malaria, 12; Febricula, 9; Stramonium Poisoning, 10; Rheumatism, 8; Cirrhosis of Liver, 8; Tubercl of Lung, 4.

Diarrhoea, as usual, accounted for most deaths, *viz*: 19, making a per-cent of 67.85 to total diarrhoea treated. This high mortality is due to the fact that cases are brought into the hospital as a last resource after the trial of the various treatments outside by the friends and relatives has proved of no avail. Diarrhoea continues, as before, the chief disease among the Tamils, and there is a special tendency in this race for it to run a very chronic course. In the estates, diarrhoea has not proved so formidable as previous years. Under the present system of treatment, there has been a distinct improvement, as a study of the estates' returns and statistics would show.

Debility accounted for 8 deaths, Anæmia 6 deaths. This anæmia is often the result of long continued diarrhoea, while ancylostomiasis would account for a good many cases. Malaria also figures as a cause. Cirrhosis of Liver, 5 deaths; Tubercl of Lung, 3 deaths; Valvular Disease Heart, 2 deaths.

5. *Hospital Staff.*—I continued in charge of the South Province during the whole year, though residing at Butterworth till 27th November, when Dr. FRY returned to relieve me of the charge of the North and Central Province, thus enabling me to devote all my time to the South Province. During my residence in Butterworth, the care of Sungei Bakap hospital was in the able hands of Mr. HOGAN, who resided here till 3rd December, when he proceeded to Bukit Mertajam to relieve Mr. WESTERHOUT, who went on leave. Mr. S. DORASAMY, as Chief Dresser, did excellent work, while Apprentice Dresser A. MOSES'S work was satisfactory. On 27th November I took up my residence at Sungei Bakap.

*Batu Kawan Estate.*

1. A few minor repairs were done to the hospital and out-houses during the year.

2. *Water Supply.*—The water supply from reservoirs, which are fed by springs on Batu Kawan hills, is conveyed by pipes to large cisterns in the coolie lines in the estate. This supply continued good and was quite ample for the needs of the coolies. Field workers had water carried out to them in boats, so that there would be no temptation to drink the filthy canal water, which is such a potent cause of gastro-intestinal disorders.

3. *Coolie Lines.*—The Tamil coolie lines were kept in fair repair, though owing to the diminishing number of coolies arriving in the estate of late years, many coolie lines were unoccupied. There are also two Chinese *kongsis* as the estate employs Chinese immigrant labourers.

4. *Hospital Staff.*—The Hospital Staff consists of a Dresser and an Assistant Dresser. The work done, by dresser THOMAS has been excellent and the improved mortality in the estate is largely due to his care.

5. *Tamil Patients.*—On January 1st there were 22 Tamil cases in hospital. During the year there were 379 admissions, making a total of 401.

*Chinese Patients.*—On January 1st, 1903, there were 3 Chinese cases in hospital. During the year there were 76 admissions, making a total of 79 cases.

Among the Tamils the principal diseases treated were:—Ulcers, 120; Diarrhoea, 63; Febricula, 32; Gonorrhœa, 19; Syphilis, 16; Anæmia, 12. Among the Chinese there were, Ulcers, 27; Diarrhoea, 16; Anæmia, 4; Buboes, 3.

There has been a great decrease in the admissions from all diseases, but notably from diarrhoea and anæmia. This is largely due to the fact that very few Indentured coolies have come to the estate during the year.

On comparing the statistics of the last years—1901, 1902 and 1903, it is interesting to note that the mortality for diarrhoea has distinctly improved, thus:—

Year.	1901.			1902.			
	Tamils.	Chinese.		Tamils.	Chinese.	Tamils.	Chinese.
Diarrhoea	149	...		111	6	63	16
Death per-centa	20.80	...		16.23	...	6.32	...

The cases treated were of the usual severe type of diarrhoea, and the improved mortality is undoubtedly due to the treatment received. More Chinese have been treated in the hospital this year than in previous years, and there is not that reluctance to come into hospital that is so common in some Chinese *kongsis*. Of the 16 Diarrhoea cases among Chinese 15 recovered and the per-centa of mortality of 6.25 is very satisfactory when we consider that most of these cases were not taken into hospital till the disease had somewhat advanced. There were 27 Ulcer cases among Chinese, only one Chinaman was treated in hospital for Fever and 4 for Anæmia. In all 79 Chinese were treated with 2 deaths, shewing a mortality of 2.5 per cent to total treated. This contrasts very favourably with the 51 admissions and 4 deaths of the previous year.

#### *Caledonia Estate Hospital.*

1. Various general repairs were carried out in the wards and out-houses, *viz*: Re-ataping of Ward No. 1 and Female Ward, Re-ataping Hospital Kitchen, Store-Room and Brick-shed, Renewal of Covered Pathway from Ward No. 2 to Latrines. Ward No. 2 was re-roofed and a new plank flooring laid. There was a slight delay in the execution of these works owing to the difficulty in obtaining native carpentering labour.

The drainage of the hospital continues good.

2. *Water Supply.*—Up to April a Lawrence Patent Water Softener and Sterilizer was used for the purification of the water required for culinary and drinking purposes in the hospital; then the boiling apparatus erected in Caledonia, near the offices was completed and enough water, *viz*: about 9,000 gallons a day, was boiled and purified for the uses of both Caladonia and Victoria, and also for the hospital. This water, after boiling, was conveyed in pipes to large iron cisterns in the *kuchis* in Victoria and Caladonia, where it was stored. Standpipe on the road side also gave a liberal supply. The supply is more than ample for all purposes and the use of this water is now general in the estates. The boiling apparatus has been in constant use with only occasional stoppages for cleansing purposes. As mentioned in the Annual Report for 1902 the use of boiled water was deemed a necessity owing to the large admissions for gastro-intestinal diseases and the high mortality from diarrhoea and dysentery. There has been a distinct reduction in the admissions into the hospital, thus:—

In 1902, 1,796 cases were treated in hospital, with 107 deaths, giving a per-centa of 5.95 to total treated.

In 1903 there were 1,433 cases treated, with 75 deaths, giving a per-centa of 5.23 to total treated, while diarrhoea and dysentery in 1902 accounted for 458 admissions and 53 deaths, giving a per-centa of 11.05.

In 1903, for the first six months (January to June) there were 212 admissions for diarrhoea and dysentery, with 26 deaths, giving a per-centa of 12.26, while in the last six months (July to December) there were 144 admissions for diarrhoea and dysentery, with 14 deaths, giving a per-centa of 9.72. This distinct reduction may be attributed partly to the improved water supply and partly to the reduction in the number of newly indentured coolies arriving on the estate.

4. *Work Done.*—On December 31st there were 77 cases in hospital; during the year there were 1,356 admissions, making a total of 1,433 treated. There were 75 deaths, giving a per-centa of 5.23 to total treated.

The principal diseases treated were:—

				Admissions.	Deaths.
Diarrhoea	...	...	...	281	30
Dysentery	...	...	...	75	11
Intermittent Fever	...	...	...	177	...
Anæmia	...	...	...	36	12
Debility	...	...	...	53	13
Rheumatism	...	...	...	24	...
Gonorrhœa	...	...	...	31	...
Bronchitis	...	...	...	24	...

The deaths were chiefly due to diarrhoea and dysentery, anæmia and debility.

5. *Hospital Staff.*—Dr. MURRAY was in charge up to the end of June, when he resigned his appointment. For the remaining half of the year, pending the arrival of the new Medical Officer, Dr. ELLERY, I did the medical work of the estate, visiting the hospital twice a week. There are two experienced Dressers, one Apprentice Dresser, and a large staff of attendants.

6. The cook-houses established in 1902 in Victoria and Caladonia *kuchis*, where for a small sum a substantial meal could be obtained, continued a factor for good in the health of the coolies. These cook-houses are under the supervision of the Managers of the estates and great care is taken that the ingredients are good and fresh. Weakly convalescent coolies (especially after gastro-intestinal diseases) are compelled to take their meals at these cook-houses for a short time to prevent a relapse of their original disease from indiscreet dietary. Newly arrived indentured coolies are likewise compelled to take their meals here for a short time.

7. The hot *kanji* meal provided in all the estates for all indentured and re-indentured coolies every morning before proceeding to their work continues popular, and no doubt has materially assisted in improving the general health of the estates, as the coolies no longer work in the cold early hours on an empty stomach or after a meal of cold rice left over from the previous day's dinner.

#### Byram Estate Hospital.

1. The wards had various petty repairs done to them.

2. *Water Supply.*—The water taken from the Jawi stream, after it has passed into the Jawi canal, is carried in water boats to Byram, where it is boiled and purified in a special boiling apparatus; it is then stored in iron cisterns in the coolie lines. The hospital has a special boiling apparatus which supplies water for all hospital uses. There have been a few stoppages of a few days during the year for repairs and cleansing purposes. The supply is ample for all uses.

3. *Work Done*—On December 31st there were 37 cases in hospital: during the year there were 1,001 admissions, making a total of 1,038 cases. There were 18 deaths, giving a per-cent of 1.73. Last year there were 67 deaths out of a total of 1,353 treated, with a per-cent to total treated of 4.95.

The principal diseases treated were:—Diarrhoea, 185; Dysentery, 106; Intermittent Fever, 193; Bronchitis, 26; Colic, 43; Gonorrhœa, 47; Ulcers, 75; Wounds, 84.

The deaths were:—Dysentery, 10; Diarrhoea, 6; Debility, 1; and Tape Worm, 1.

#### Krian Brick Fields.

The health of the coolies employed here has been excellent, and during the whole year only six were under treatment at the Caledonia Estate hospital; of these one died from diarrhoea.

#### Valdor Estate.

1. The estate hospital was closed in the early part of the year and all the old indentured Tamil coolies discharged. There are about 48 Chinese immigrant coolies employed in this estate and all cases of ailments among them are treated in the Sungei Bakap District Hospital.

#### General Remarks.

1. There has been a great improvement in the health on all the estates in the South Province and while diarrhoea and dysentery still continue the mortality from those diseases has been greatly reduced.



2. The admissions into the Sungai Bakap hospital shew a distinct fall off, this is due to the fact that many estates have been closed within recent years, owing to various causes, while in the estates still existent there has been a great decrease in the arrival of indentured coolies, and it is these estates that supply the sick who are treated in the Government hospital.

3. *Zymotic Diseases.*—Various sporadic cases of small-pox occurred in the South Province, and only at Sungai Atchi did the disease approach epidemic proportions. In all there were 36 cases, *viz.*: Nebong Tebal, 1; Caledonia, 1; Ratu Pangang, 1; Sungai Bakap, 1; Simping Ampat, 1; and 31 at Sungai Atchi. For the most part these cases were treated locally in isolation sheds. Owing to the prejudices of the natives, their ignorance of the very infective nature of the disease, and their general indifference to it, these cases were generally not reported till the disease had somewhat advanced, and after the exposure of relatives and friends to the virus of infection. The small fines inflicted by the magistrates for failure to report cases were readily paid, the money being generally obtained by public subscription.

4. There were no epidemics in any of the estates. At Batu Kawan one case of chicken-pox was at once isolated, at Victoria there were two cases of mumps.

5. *Public Health.*—The Sanitary improvements, the result of the vigorous action of the Sanitary Board, still continue at Nebong Tebal, while in the other villages there are like improvements in the sanitation.

#### APPENDIX D.

##### MALACCA.

###### REPORT BY DR. F. B. CROUCHER, *Colonial Surgeon.*

1. The general health of the Settlement during 1903, judging from the death-rate was fairly good. With an estimated population at the end of 1903 of 98,525 the death-rate was 33·81 per mille against 31·19 per mille last year and 33·92 per mille in 1901. The deaths in children under one year of age numbered 1,005, nearly 33 per cent of the total.

2. The chief causes of death were given as:—

Fever	1,405	against 1,398 last year, and 1,623 in 1901.
Convulsions	735	" 697 "
Phthisis	163	" 126 "
Bronchitis	115	" 129 "
Intestinal Disorder	116	" 47 "
Beri-beri	180	" 169 "
Old Age	225	

3. The total number of deaths in the Settlement during the year was 3,332 (male 2,008, female 1,324) as against 3,037 in 1902 and 3,265 in 1901, giving a death-rate of 33·81 per mille for the whole Settlement. Of the deaths 693 occurred within municipal limits with an estimated population of 15,748 and 2,639 in the country, with an estimated population of 82,777. This gives death-rate for the town of 44·07 per mille and country 31·85 per mille.

4. Of the 693 deaths within municipal limits 182 were returned as due to Fever, 150 Convulsions, 61 Phthisis, 39 Beri-beri, Intestinal Disorder 18. The death-rate for the town is very high and is due principally to the following causes:—

(a). The high infantile mortality, which may be set down to a great extent to improper feeding.

(b). The large proportion of children and old people to young adults, due to the emigration of the latter in search of employment, as shown at the last census.

(c). The large proportion of males to females, about 3·2, the death-rate being normally lower in the latter than in the former.

(d). The custom among estate coolies of coming into Malacca when ill.

5. The total number of births during 1903 was 3,976; (male 2,070, female 1,906) against 3,457 in 1902, giving a birth-rate of 40·35 per mille of these 535 were registered

in the town and 3,441 in the country districts giving a birth-rate for the town of 33.97, country 41.76.

6. Small-pox continued from the previous year and occurred at intervals in all parts of the Settlement. In all there were 266 cases with 40 deaths. Of the 266 cases 131 occurred in persons who had been previously vaccinated and of the remaining 135 cases 70 were in persons over 15 years of age.

7. *Dysentery*.—An outbreak of a very severe type of dysentery occurred at Telok Mas in April. There were in all 34 cases with 21 deaths. Samples of water from the wells used in the *kampong* were sent to the Government Analyst for examination and found by him to be good in quality. The disease probably spread from the pools which are present under Malay houses, into which, in a case of illness of this sort the excreta drain and which communicate frequently with the main ditches.

8. *Civil Hospitals*.—The total number of cases treated at all the hospitals in the Settlement was 3,932, against 3,200 in 1902 and 3,641 in 1901.

9. The number of deaths, was 322 giving a death-rate of 10.62 per cent against 7.38 per cent for 1902 and 8.66 for 1901.

10. *Staff*.—Many changes were made among the staff at the various institutions during the year. Dr. SHEPPARD, who had been acting during the time I was away on long leave, was relieved by me at the end of August. Mr. WRAY was in charge of the Durian Daun hospital at the beginning of the year and was succeeded by Mr. REARDON in February. He remained till May when he was transferred to Jasin, being relieved by Mr. BATEMAN, who remained in charge till the end of the year. Jasin hospital was in charge successively of Messrs RAPPA, REARDON, RUFUS, BAYLEY, PAUL and SEN and Alor Gajah of Messrs SEN, BAYLEY and Dresser DIAS. Assistant Surgeon REARDON died while in charge of Jasin Hospital.

#### Durian Daun Hospital.

1. The new operating room was completed but the furniture and fittings had not arrived at the end of the year. The Gangrene Ward was renewed, brick pillar and weather boarding replacing the old wooden and bertam wall. The roof of the Sikh and Police Wards were raised and re-ataned. All the Wards, Latrines and Out-houses were limewashed and tarred during the year.

#### General Hospital.

2. *European Ward*.—Remained, nil; Admitted, 20; Discharged, 18; Died, 1 (Acute Alcoholism); Remaining, 1; Average Daily Sick, .49.

3. *Native Ward*.—Remained, 8; Admitted, 263; Discharged, 257; Died, 8\*; Remaining, 6. The causes of death were:—Acute Mania, 1; Compound Fracture of Femur, 1; Dysentery, 1; Multiple Injury, 1; Penetrating Wound of Abdomen, 1; Debility, 1; Beri-beri, 1, and Ptomaine Poisoning 1.

Average Daily Sick, 4.25. Per-cent of Death to Total Treated, 2.95.

#### Quarantine Camp.

Remained, nil; Admitted, 48; Discharged, 38; Died, 10 (small-pox); Remaining, nil.

Average Daily Sick, 2.66. Per-cent of deaths to Total Treated, 20.83.

#### Pauper Hospital.

1. Remained, 89; Admitted, 1,529; Discharged, 1,203; Died, 219; Remaining, 196.

Average Daily Sick, 153.51. Per-cent of Deaths to Total Treated, 13.53.

The Daily average number of sick shews a slight increase as compared with last year's, being 153.51 against 146.4.

2. The chief cause of the high death-rate was the prevalence of beri-beri, there having been 251 cases of this disease, with 64 deaths, as against 190 during 1902, with 29 deaths.

3. The other principal diseases treated were:—Dysentery and Chronic Dysentery; 35; with 16 deaths; Malarial Fever 260, with 7 deaths; Phagedæna, 46, with 13 deaths; Syphilis Primary, 9; Syphilis Secondary, 62; Syphilis Tertiary, 11, with 1 death;

Hemiplegia, 9, with 3 deaths; Valvular Disease of Heart, 11, with 3 deaths; Phthisis, 55, with 27 deaths; Pneumonia, 16, with 6 deaths; Diarrhoea, 47, with 20 deaths; Chronic Nephritis, 12, with 4 deaths; Ulcer, 346; Wounds, 20.

4. *Operations.*—Seventy operations were performed with three deaths (Laparotomy for Cancer of Liver, Instrumental Delivery and Operation for Empyema).

5. *Necropsies.*—One hundred and twenty-two were made during the year.

#### **Gaol Hospital.**

1. The general health of the prisoners and sanitary condition of the gaol have been satisfactory. The average daily number of prisoners was, Civil 3·08 and Criminal, 14·64 patients.

Remained, 43; Admitted, 50; Discharged, 25; Transferred, 27; Died, 4; Remaining, 37. The causes of death were: Beri-beri, 2; Phthisis, 1; and Debility, 1.

2. Twenty-nine prisoners suffering from beri-beri, who had been brought from Singapore in 1902, were still remaining here at the beginning of the year. Of these two died and the remaining 27 were sent back to Singapore much improved in health. Thirty-seven more were sent here in December and, with the exception of two suffering in addition from other diseases, are doing well.

#### **Leper Asylum**

Sixteen lepers were admitted during the year, including one female. Of these 13 were transferred to Singapore and 3 are remaining in the asylum awaiting their removal to Singapore. As there is only one ward available, the female leper had to be kept at Durian Daun Hospital till removal.

#### **District Hospitals.**

The number of patients admitted to the District hospitals was 993, 383 at Alor Gajah and 610 at Jasin, against 997 during 1902. There were 1,154 out-patients, an increase of 239 over last year.

##### **Alor Gajah Hospital.**

1. *Buildings.*—A new latrine of an improved type has been constructed during the year and small repairs have been made to the buildings.

2. *Patients.*—Remained, 31; Admitted, 383; Absconded, 7; Transferred to Durian Daun, 3; Discharged, 373; Died 15; Remaining, 16.

3. The average daily number of sick was 30·19 and the per-centge of death to total treated 3·86, against, 23·21 and 4·75 respectively in 1902.

4. The chief causes of death were Beri-beri, 4; Remittent Fever, 3; Phthisis, 3; Diarrhoea, 3.

5. The chief diseases treated were:—Malaria, 51; Ulcer, 128; Beri-beri, 13; Anæmia, 23; Wounds, 18; Diarrhoea 10.

6. Of those admitted to hospital 267 were Chinese, 53 Malays and 60 Klings.

Four Police Constables were admitted during the year.

7. One hundred and thirty-five cases of small-pox were reported in this district. They were all treated in their own houses. Ten deaths occurred among them.

##### **Jasin Hospital.**

1. *Buildings.*—The latrines were reconstructed on a more satisfactory model, the old ward was re-taped and other minor repairs carried out.

2. *Patients.*—Remained, 37; Admitted, 610; Absconded, 11; Transferred to Durian Daun, 6; Died, 67; Discharged, 543; Remaining, 20.

3. The average daily number of sick was 35·76 and the per-centge of death to total treated 10·35, against 25·46 and 9·65 during 1902. Of the total number of patients 138 came from the Native States. The chief causes of death were:—Beri-beri, 15; Diarrhoea 13; Dysentery, 9; Anæmia, 6; Valvular Disease of Heart, 4.

4. The chief diseases under treatment were:—Ulcer, 254; Malaria, 76; Beri-beri, 38; Dysentery, 22; Diarrhoea, 28; Anæmia, 32; Rheumatism, 34.

5. Eight Police Constables were under treatment during the year.

## APPENDIX E.

**HOSPITALS FOR WOMEN PREVIOUSLY TREATED UNDER THE PROVISIONS OF "THE CONTAGIOUS DISEASES ORDINANCE."**

**Singapore.**

REPORT BY Dr. R. DANE, *Colonial Surgeon.*

1. The buildings are in a good order. No additions or alterations were made excepting that, the Dresser having removed into the new quarters provided for him in the old Lunatic Asylum grounds, his old quarters were available as an extra ward, but they were not put into use during the year as the existing accommodation proved ample.

2. There has been a slight falling off in the number of admissions, 189 as against 200 in 1902. More private hospitals have been opened in the town, where the minor venereal complaints are treated.

3. Thirty-seven patients remained under treatment at the beginning of 1902, and with the 189 admissions give a total of 226: 139 were Venereal Diseases and Aequela, 87 were other Diseases.

4. The average daily sick was 36·1, against 39·4 in 1902.

5. Twenty-two deaths occurred, giving a per-cent of 9·7 as against 12·3 in the previous year.

6. The causes of death were as under:—Beri-beri, 4; Phagedæna 1; Puerperal Pyæmia, 1; Tuberclæ, 9; Syphilis, Secondary, 5; Diarrhoea, 2. Total 22.

**Penang.**

REPORT BY Dr. HILL JAMIESON, *Acting Colonial Surgeon.*

1. I took over charge from Dr. FREER in April.

2. There were 14 cases remaining at the beginning of the year, 73 were admitted, making a total of 87. The admissions comprised Japanese, 47; Chinese, 13; Hindus, 13.

3. The average daily sick was 8·90 and the per-cent of deaths 9·19.

4. The principal diseases treated were Venereal, 39; Malarial Fever, 9; Pulmonary Tuberculosis, 6; Diarrhoea and Dysentery, 4; Beri-beri, 3.

5. There were 8 deaths in all, from the following causes. Dysentery, 1; Beri-beri, 2; Remittent Fever, 1; Syphilis (Secondary) 1; Pulmonary Tuberculosis, 2; and Diarrhoea, 1.

**Province Wellesley.**

REPORT BY Dr. W. H. FRY, *Colonial Surgeon.*

No women voluntarily submitted themselves for treatment at any of the hospitals in the Province.

**Malacca.**

REPORT BY Dr. F. B. CROUCHER, *Colonial Surgeon.*

Ten prostitutes submitted themselves for treatment at the hospital for Venereal Diseases, 5 Chinese and 5 Japanese.

## APPENDIX F.

**OUT-DOOR DISPENSARIES.**

**Singapore.**

REPORT BY Mr. C. V. NORRIS, *Assistant Surgeon.*

1. Eight thousand and fifteen patients attended this Dispensary, being an increase of 627 cases over those of 1902.

2. The following shows the nationalities of the patients:—

				<i>Male.</i>	<i>Female.</i>
Europeans	...	...	...	42	7
Eurasians	...	...	...	96	109
Malays...	...	...	...	383	77
Indians	...	...	...	2,038	418
Chinese	...	...	...	4,268	449
Others ...	...	...	...	66	62
			Total,	6,893	1,122

3. The average daily attendance was 81.93.

4. The principal diseases treated were:—Ulcer, 1,439; Fever, 1,192; Injuries, 926; Venereal Affections, 907; Skin Diseases other than Ulcer, 878; Rheumatism, 596.

5. The fees collected amounted to \$2,366.25, being \$129.70 more than in 1902.

6. The expenditure exclusive of Staff and medicines was \$53.59.

### **Penang.**

#### **REPORT by Dr. T. C. MUGLISTON, Colonial Surgeon.**

1. The patients treated during 1903 numbered 4,909, an increase of 15 over last year. The daily average number of patients attending was 32.69 and the receipts amounted to \$752.05.

2. The principal diseases treated were:—Malarial Fevers, 1,273; Rheumatism, 399; Syphilis, 219; Bronchitis, 217; Ulcers, 452; Diarrhoea, 127; Dyspepsia, 158; Tonsillitis, 109, and various Injuries 326.

3. This institution continues to be well patronized by the poorer class of natives.

### **Balik Pulau.**

1. There were 464 patients attending the Out-door Dispensary during the year as against 452 in the previous year.

2. The following table gives a statement of the work done during the year:—

Number of Patients	...	...	...	...	464
Do. Visits	...	...	...	...	638
Do. Government Servants	...	...	...	...	115
Do. Paying Patients	...	...	...	...	264
Do. Indigent Patients	...	...	...	...	85
Average Number of Visits per diem	...	...	...	...	1.74
Number of Males	...	...	...	...	385
Do. Females	...	...	...	...	79

Receipts for the Year, \$33.35.

3. The nationalities of those treated were:—

Chinese, 227; Klings, 95; Malays, 98; Eurasians and Europeans, 29; Bengalis, 15. Total, 464.

4. The chief diseases treated comprised:—Fever and Ague, 134; Skin Diseases, including Ulcers, 106; Bronchitis, 44; Rheumatism, 18; Constipation, 19; Conjunctivitis, 16; Venereal Diseases, 12; Diarrhoea, 7; Colic, 7; Abcess, 7; Injuries, 17.

### **Dindings.**

This shews a fair attendance. Five hundred and twenty-six patients were treated, as against 486 the previous year. The fees collected amounted to \$24.60, shewing an increase of \$11.05 over the previous year.

### **Butterworth.**

The number of cases attending the Out-patient Department was 357, this being a considerable reduction on the number who attended last year.

The receipts amounted to \$39.75, the number of paying patients being 171.

The bulk of those who attended were Hindus, with 90 attendances, Malays and Chinese being next, with 69 and 68 respectively.

The chief diseases treated were:—Fever, Minor Injuries and Bowel Complaints.

#### Bukit Mertajam.

The number of patients who attended was 295, 39 being paupers, 43 Government Servants and 213 paying patients.

The receipts for the year were \$42.40.

The bulk of the patients who applied were Chinese, the chief nationalities being Chinese, 134; Indian, 72, and Malays 49.

The chief diseases treated comprised:—Ulcers, 81; Fever, 52; Venereal Diseases, 38; Minor Injuries, 33.

#### Sungei Bakap.

During the year there were 320 out-patients.

The principal diseases treated were:—Malaria, 91; Ulcers, 51; Rheumatism 14; Constipation, 19; Debility, 10; Worms, 10; Bronchitis, 10; Ring-worm, 9; Eczema, 8.

The receipts amounted to \$33.50.

#### Malacca.

##### REPORT by DR. F. B. CROUCHER, *Colonial Surgeon.*

1. The number of patients attending the Dispensary was 2,001, an increase of 137 over last year, the increase being chiefly among the indigent patients treated.

The fees amounted to \$193.60, an increase of \$2.

The following Table shews the nationalities of those treated:—

					Male.	Female.
Europeans	..	..	..	..	86	22
Eurasians	...	...	...	...	339	304
Chinese	...	...	..	...	398	135
Malays	...	...	...	...	300	56
Indians	...	...	...	...	246	49
Others	...	...	...	...	14	52
				Total	1,683	618

The chief diseases treated were:—Malaria, 266; Rheumatism, 115; Venereal Diseases, 116; Respiration Disorders, 271; Digestive Disorders, 243; Skin Diseases, 168; Minor Operations, 49.

The steps leading to the Dispensary were altered at the beginning of the year to make room for the new door of the Post Office but the new steps are very steep and must be a difficulty to sick persons.

#### Alor Gajah.

The total number treated was 736, against 624 last year, the receipts amounted to \$51.20 against \$30.55.

#### Jasin.

There were 408 out-patients treated, against 291 last year. The collections amounted to \$27.05.

#### APPENDIX G.

#### VACCINATION.

##### Singapore.

1. The number of vaccinations performed by the Public Vaccinator was 2,738, of which only five failed. Of the number of vaccinated 1,324 were males and 1,414 females; 2,058 were infants under one year old.

2. The cost of each vaccination was a little over 42 cents.

3. The number of births registered during the year was 5,089.

4. The number vaccinated in the town district was 1,855, and that in the country 883.

5. Besides the above 1,337 vaccinations with 36 failures, were done by Mr. J. C. PESTANA and 210 vaccinations with 14 failures by Mr. A. G. HOEDEN, Licensed Vaccinators.

### Penang.

REPORT BY Dr. T. C. MUGLISLTON, *Colonial Surgeon.*

1. The number of vaccinations performed by the Public Vaccinators was 3,419, as compared with 3,103 in 1902. This does not include 971 vaccinations in the prison and those performed by private practitioners.

2. The per-cent of perfect and modified cases was 76.33 of failures 10.58, and of the not seen 7.25 per cent.

3. Of the total 1,888 were in municipal limits and 1,531 in the country district; the average cost of each successful and modified case in the former being 72 cents, and in the latter 84 cents.

4. At the Dindings 145 children were vaccinated as against 124 during the previous year. The per-cent of perfect and modified cases was 92.41, and of the not seen 2.75.

### Province Wellesley.

REPORT BY Dr. W. H. FRY, *Colonial Surgeon.*

1. The number of vaccinations performed during the year was 3,688. These were performed as under:—

	Perfect.	Modified.	Failed.	Seen	Not	
					Total.	
Northern District	1,612	152	106	4	1,874	
Central District	568	69	239	1	877	
Southern District	753	56	122	6	937	
	—	—	—	—	—	—
	2,933	1277	467	11	3,688	

The undermentioned Table shews the various nationalities:—

Eurasians	Malays	Chinese	Indians	Siamese	Others	Total.
9	2,559	540	559	6	15	3,688

The per-cent of failures was unduly high throughout the whole Province, particularly in the Central and Southern Districts, and shews that the Dressers employed did not exercise sufficient care over their work.

Saigon lymph was used on all occasions.

The cost of the vaccinations in the various districts was:—North, 46 cents per head, Central, 63 cents per head, South, 59 cents per head.

### Malacca.

REPORT BY Dr. F. B. CROUCHER, *Colonial Surgeon.*

The total number of operations performed was 3,959 of which 2,939 were successful, 813 failed and 207 not seen. The per-cent of failures to total vaccinated was 20.53; this very high average was said to be due to the lymph supplied from April to August being of inferior quality. Of the 813 unsuccessful cases 404 were re-vaccinated, of which 358 were successful; 32 failed and 14 were not seen. The number of births registered during the last quarter of 1902 and first three quarters of 1903 was 3,933 and the number of deaths among children under one year of age was 1,007, a surplus of births over deaths of 2,926. There were 2,959 vaccinations performed in children under one year of age during the year.

### APPENDIX H.

#### QUARANTINE.

##### Singapore.

REPORT BY Dr. G. E. BROOKE, *Port Health Officer.*

1. *Shipping.*—The year may be considered as a satisfactory one. The number of ships examined were 806, compared with 901 in 1902. On the other hand there

was an increase of over 10,000 in the number of passengers examined, who totalled 257,680, of whom 220,321 were Chinese Immigrants and 8,778 were outgoing pilgrims for Jeddah.

Thirty-four ships were infected (Plague, 12; Cholera, 7; Small-pox, 15). Plague became prevalent in Hongkong and Amoy from March to about October, with a maximum in June. Immigration was prohibited for one or two months from both places.

Small-pox occurred on several vessels returning from Jeddah. The remaining small-pox infections were practically all on ships direct from Bombay.

Java and its neighbourhood have been fortunately more free from Cholera last year than usual.

The cholera arrivals were all from Chinese ports, mostly Amoy.

Last year I adopted inoculation with Haffkine's serum as a routine prophylactic for crews of ships infected with plague, and for any cabin passengers who might wish it. Seven hundred and sixty-one (761) inoculations were so done with the most excellent results as far as I have had opportunity of judging.

Coolie ships arrived in a cleaner state towards the end of the year, possibly as I had insisted that a considerable quantity of disinfectants were to be carried—a regulation kindly enforced by the Consuls at Amoy and Swatow.

The number of bloods, smears, etc., examined microscopically during the year amounted to 37.

Two autopsies were made on board vessels.

2. *Quarantine Station*.—The Quarantine Station was occupied during the year for 352 days and 359 visits were paid by the Port Health Officer or his Deputy.

The total persons landed on St. John's were 21,253, as compared with 17,668 during the previous year. The greatest number of inmates on any one day amounted to 2,318, the average daily number of passengers being 527·52.

The total number of sick treated were 682, of whom 253 died.

The greatest number of patients on any one day amounted to 145: the average daily number of sick being 22·93.

The per-cent of deaths to total treated was 37·09.

Much discomfort was experienced by the want of a *post mortem* room, which I am glad to say has now been erected; notwithstanding this, 79 autopsies were made on the Island.

Vaccinations with lymph to the number of 140 were done at the Quarantine Station.

One rather severe epidemic of plague and two of cholera were dealt with on St. John's, and the precautions taken were successful in preventing the introduction into Singapore.

3. *Staff*.—The advent of Dr. CATTO in July as First Resident Medical Officer for the Quarantine Station has proved highly satisfactory. His conduct of affairs has been excellent, and has relieved the Port Health Officer of much anxiety. His work was carried out conscientiously, although largely of a non-medical character. Under his admirable supervision a very pressing need has been carried out by the voluntary work of the passengers, *viz.*, the clearing of the jungle through the whole island.

The Sikh Police proved much more satisfactory than the Malays. Two additional Dressers procured during the period of exceptional strain at St. John's, as also the two Dressers of the permanent staff, did good work, and have much improved under Dr. CATTO'S supervision. The gardeners and Chinese attendants, amongst whom were several changes during the year, did work without cause for complaint.

The admirable and painstaking work of Assistant Surgeon WRAY calls for mention. He superseded Assistant Surgeon PESTANA in the month of February.

4. *General Remarks*.—While looking after the comfort of the immigrants as well as possible (probably better than in any other Quarantine Camp of the size) the fact should not be overlooked that the main object of quarantine is to prevent the introduction of disease. With regard to Singapore I am happy to state that the work in this respect has been successful. Although over 257,000 persons were examined, and pratiques of the year amounted to 806, yet no known case of cholera, plague or small-pox has been introduced into the Colony, and this notwithstanding

the fact that 33 of the arriving vessels were infected and 426 cases of plague, cholera and small-pox were dealt with at St. John's.

During the year the following services were completed:—

(1). Post-mortem Room. (2). Wardlets. (3). Wire Fencing for Camps. (4). Building for Disinfecto. (5). Quarters for Engineer.

Amongst other services asked for, the following have been sanctioned:—

(1). 14 Wards for Contacts. (2). Luggage Sheds with Tramway. (3). Steam Lighter for Disinfection. (4). Two New Piers. (5). Latrines for all Camps (6). One Incinerator. (7). European Isolation Hospital. (8). Quarters for Nurses. (9). Native Plague Isolation Hospital. (10). Native Small-pox Isolation Hospital. (11). Condensing Plant for Water. (12). Reservoir and Service Pipes to Camps. (13). A Sea Wall. (14). New Dressers' Quarters. (15). New Food Store. (16). 100 New Beds. (17). 35 Disinfecto Chatties. (18). Brick Drains (various). (19). Lamps for Hospitals. (20). One new Dresser. (21). Two New Attendants.

In the early part of the year I suggested an appeal to the Chinese Advisory Board for some funds to provide the lowest classes of Chinese coolies with clothing and mats when quarantined on St. John's Island. I have much pleasure in stating that this appeal was responded to with the usual generosity and public spirit shewn by the influential Chinese of Singapore.

The sum of \$810 was collected during June and July and \$83 was expended during 1903 to the great advantage of some hundred odd coolies.

During the year several prosecutions were instituted for offences, against the Quarantine and Prevention of Disease Ordinance, all of which resulted in convictions.

#### APPENDIX A.

(BEING NOTES OF RESIDENT MEDICAL OFFICER ST. JOHN'S ON SYMPTOMS AND  
POST-MORTEM RESULTS IN CHOLERA PATIENTS FROM THE FOLLOWING  
SEVEN SHIPS, JULY TO DECEMBER, 1903.)

	Contacts.	Cases.	Deaths.
s.s. "Waihora"	717	68	50
s.s. "Cheang Chew"	846	35	25
s.s. "Hong Wan"	2	2	2
s.s. "Glenfalloch"	473	27	16
s.s. "Hong Moh"	1,702	92	66
s.s. "Chwn Shan"	1,135	19	10
s.s. "Wakasa Maru"	24	2	0

NOTE.—The above figures include 7 corpses sent from s.s. "Waihora" for burial, also two from s.s. "Glenfalloch" and one from s.s. "Chwn Chan."

Mortality 3.3 per cent. }  
Case Mortality 67.6 do. } from cases landed on island.  
Morbidity 4.8 do. }

All the corpses were buried by the gardeners on Lazarus Island, and clothing was found in some cases to retard the decomposition of the bodies.

*Contacts.*—While the permanent wards (Nos. 2—6) were being repaired army tents were used to house the contacts. These tents were very useful afterwards in that they allowed picked batches of a hundred men or so to be completely isolated from the others. When free from cholera for five days each batch was allowed to leave the island. This shortened the quarantine of many.

If a case of cholera was found the whole camp was easily and quickly shifted. The rubbish from the cook-houses and wards was buried twice a day. The wards were sprayed with Jeye's Fluid 1 to 50 twice a day. Jeye's Fluid was provided for the contacts to wash their utensils. Latrines were found inefficient on account of the nature of the soil. The night-soil was best got rid of by digging trenches a foot deep about 6 feet below high-water mark. The trenches were dug twice a day.

*Cases—Prophylaxis.*—The contacts had the opportunity of taking healthy gentle exercise (morning 7 to 9 a.m., evening 3 to 5 p.m.) in clearing the jungle. The Government paid these men by supplying extra rice and salt fish. In many cases volunteers for work had to be rejected owing to insufficiency of instruments. On hot afternoons and rainy days no work was done.

Eucalyptus oil, in doses of 10 minims twice a day, was given as under:—Two cases of cholera occurred among the Public Works Department workmen, of whom there were seven. Five took eucalyptus oil and were not attacked by cholera. Three batches of 50 men taken from Wards Nos. 4 and 13 (where most cases had occurred) and No. 15 (where fewest cases were occurring) were given the oil. One case occurred in the batches from 4 and 13 and none in No. 15 for the same period (the last eight days of Hong Moh contacts) 4 cases of cholera appeared in the other 129 of No. 4 and 2 cases in the 102 of No. 13. None occurred in No. 15.

*Detection.*—Two daily parades and inspections were made and the contacts counted, *viz.*: 6.30 A.M., and 2.30 P.M. *Kebuns* were present most of the day and the Police went through the wards once every four hours. Malays are useless for any Police duty on a quarantine station. Contacts with diarrhoea, abdominal tenderness and heat, or with increased knee jerks were isolated. Cases with lost elasticity of skin, most pronounced in the front of the neck or dorsal aspect of hand and feet were always suspicious.

*Treatment.*—The Dresser in charge of each camp carried Calomel in five grain doses; this was given to each man on the spot before he was carried to hospital, where Eucalyptus oil mixture every two hours was given with hot milk and brandy. Latterly Tincture Jaborandi (mx in half an ounce of water) was given instead of the Eucalyptus oil, while a mixture of hot tea, milk and brandy was given *ad lib.* After the algide stage had passed the Jaborandi was stopped and an ounce of the following mixture given every four hours, for two or three days, according to the condition of the patient.

Tinc : Nucis Vomicae	...	...	...	mxv
Acid sulphur dil	...	...	...	m 3
Quin : sulph : ...	...	...	...	gr 1
Brandy ...	...	...	...	ad oz 1

Each case was then washed with Jeye's Fluid, supplied with disinfected clothing, and sent to a different ward (convalescent ward) here the brandy mixture was given four times a day, congee water for one week, when rice and salt fish were allowed. To prevent mistakes in identity the cases were marked on an extremity with their number in the Hospital Register. Silver nitrate was used for this and proved very satisfactory.

*Symptoms.*—There were two pregnant women (four and six months) both aborted. In addition to the ordinary signs, a diffuse general erythema, persisting after death, was noticed in several of the later cases. Two cases (one treated by Eucalyptus oil and one by Jaborandi) developed a diffuse general erythema with arterial patches on parts exposed to irritation, *viz.*; elbows, calves, over scapular region, and all parts touching the bed. This was following by general scaly desquamation. The knee jerk was not obtained during the algide stage. The conjunctival vessels were in some cases injected. No characteristic tongue was observed till the convalescent stage, when each tongue looked as though it had been thoroughly scrubbed clean. This condition remained for at least ten days. This might have been due to the dieting not to the disease. Blood was difficult to obtain by pricking and in two cases examined a marked increase in both red and white corpuscles was found.

*Post-mortem Results.*—*Post-mortems* made in 63 cases. Two died of pyaemia following purulent pleurisy with pneumonia (one had an urethral stricture.) Three died of debility after formed stools had been passed. One died from purulent pericarditis. One died from perforating peritonitis from old dysenteric ulceration.

*Organs (Heart).*—The left ventricle was almost always contracted, although never quite empty. The other cavities were dilated with dark fluid blood with very small black threads of blood clot. In two cases, when the section was made about twenty minutes after death, the left ventricle was distended with dark chocolate coloured blood as well as the other cavities. The aortic epicardium was very often injected.

*Lungs.*—In most cases where no organic disease of the lungs existed the pleural cavity was dry and sticky, while the lungs were small, collapsed, pale grey in colour, and lay in the posterior angle of the ribs. A possible explanation may be found in *post mortem* rigidity of the lung and heart muscle. The liver, spleen and kidneys were congested. The bladder in cases dying during the cold stage, was nearly empty, never quite. In cases passed this stage a variable amount of urine was found. The suprarenal capsules were dry and sticky. The pancreas itself was not appreciably altered, although its superficial veins were distended with blood.

*Bowel.*—The condition of the bowel varied a great deal. Usually the stomach

was very pale grey, while its vessel seemed picked out by injection. Sometimes this organ had superficial slight ulceration. The intestine had its peritoneal coat cream-coloured, dry and sticky with a rose-pink injection of its vessels, in 13 out of 56 cases; in 5 cases the lowest foot of the ileum was acutely congested. In the remaining 38 cases the peritoneal coat was dull grey blue in colour. Perhaps the time of making the *post-mortem* had to with do this. The mucous membrane in the 5 was also acutely congested. In the other cases it had a swollen, dull red appearance. The large intestinal mucous membrane in many cases shewed signs of previous attacks of dysentery, while its peritoneal coat shewed the injection of its vessels. In three of the last cases were noticed small pinhead velvety thickenings of mucous membrane, appreciable to the touch, in the lower two feet of the ileum.

The contents of the intestines varied:—

(a) Cholera bacilli were not always found. The commonest kind of stool found was of a thick syrupy consistence with a yellow white to yellow brown colour. This resembled melted Camembert cheese. It often had a dull white albuminous appearance and was sometimes suspended in clear watery fluid.

(b) Rice-water stools came next. The watery fluid was sometimes quite clear, at other times resembled dish water.

(c) A chocolate brown curd suspended in a dirty watery liquid.

(d) Pea soup faecal stained matter.

(e) Empty (except for some thick viscid albuminous material between rougues).

Number (a) appeared to be preliminary to Number (b).

Number (c) appeared to be Number (b) with acute congestion and haemorrhage.

Number (d) was found in one case dying within twenty-four hours, in the others where rallying had failed.

One case had been passing rice water stools and formed faeces were found in the large intestine.

	(a)	(b)	(c)	(d)	(e)
Small intestine	...	21	15	11	4
Large intestine	...	9	22	8	8

In one case dying in the acute stage of cholera the liver was markedly enlarged, palpable two inches below costal range. When removed from the abdomen the liver appreciably diminished in size. It was leathery in consistence. Irregular areas on the surface were marked out by irregularly placed shallow depressions. The areas varied in size up to three-quarters of an inch, the mesenteric glands varied in size to a tangerine orange. The large intestine had its coats thickened to half to three-quarters of an inch, getting thicker at the rectum and thinner towards caecum. Dr. Finlayson cut sections and shewed there was marked hypertrophy of the muscular tissues due to oval bodies Coccidia?

#### APPENDIX B.

##### MONTHLY NUMBERS OF SHIPS AND PASSENGERS.

1903.	Vessels. Examined.	Vessels. Infected.	Nos. of Crew.	Nos. of Passengers.
January	41	1	2,801	16,725
February	39	4	2,845	7,397
March	80	3	6,423	44,565
April	74	5	5,584	34,229
May	64	3	6,695	34,819
June	73	5	6,002	17,508
July	83	3	6,693	12,852
August	74	1	6,143	6,706
September	69	3	5,445	17,339
October	60	3	4,324	25,437
November	70	3	5,229	21,224
December	73	nil	5,491	18,819
Totals	806	34	63,685	256,680

## APPENDIX C.

## MONTHLY METEOROLOGICAL RETURNS.

## St. John's Island.

1903.	Rain.	Rel. Humidity.			Shade Tem.				
		In.	cts.	Max.	Min.	A.D.M.	Max.	Min.	
January	18	49		100	80	90	86	74	79.8
February	21	83		100	76	95	87	71	79.8
March	3	80		100	71	90	89	70	79.2
April	9	37		100	64	80	88	70	79.3
May	3	76		95	68	76	88	71	79.5
June	12	57		100	76	85	88	71	79.5
July	7	76		100	80	85	88	71	79.4
August	9	97		95	61	85	88	71	79.6
September	3	56		95	60	85	88	71	80.2
October	8	24		95	80	90	88	71	80.2
November	15	70		100	85	90	88	71	79.9
December	9	36		100	72	90	88	71	72.9
Total Rainfall		...		...	...	...	123	51	
Max: Rel: Humidity		...		...	...	...	100		
Min		...		...	...	...	61		
Average Daily Mean		...		...	...	...	86		
Max: Shade Tem:		...		...	...	...	80	F	
Min		...		...	...	...	70	F	
Av: D. Mean		...		...	...	...	79.6	F	

## APPENDIX D.

## COMPARATIVE DATA, 1902 AND 1903.

Heading.	1902.	1903.
Vessels Examined	901	806
Crews Examined	63,037	63,685
Coolies Examined	244,863	257,680
Days Quarantine Station Occupied	360	352
Total Persons Landed on St. John's	17,668	21,253
Greatest Number on St. John's on any Day	2,748	2,818
Average Daily Number of Inmates	496.88	587.52
Total Sick Treated	2,029	682
Greatest Number of Patients on any Day	...	145
Average Daily Number of Sick	24.93	22.93
Number of Deaths	545	253
Deaths to Total Treated	26.91	37.09
Autopsies on St. John's	...	79
Do. Ships	...	2
Blood Smears, Etc. Examined	...	37
Inoculations with Haffkine's Serum	...	761
Vaccinations on St. John's	...	140

## Penang.

REPORT BY DR. J. C. COLIN FORD, *Deputy Port Health Officer.*

*Harbour.*—The number of incoming vessels, junks and *tongkangs* boarded and inspected amounted to 957. Twenty-nine thousand five hundred and twenty-three

crew and 150,728 passengers were examined. This total includes 6 pilgrim vessels to Jeddah, carrying 4,213 pilgrims, inspected under the Pilgrim Ships' Ordinance.

*Quarantine.*—The Quarantine Station was occupied 10 times during the year and 1,688 passengers were detained. Appended is a tabular statement, giving the particulars of each occupation of the station.

*Cholera.*—Twenty-two cases were imported. Three of these occurred in the town and were recent arrivals from Singapore by the s.s. "Lai Sang," s.s. "Calypso" and the s.s. "Hebe." Six were detected on vessels at time of arrival; the remaining 13 occurred among the passengers landed from the s.s. "Waihora" coming from China.

*Plague.*—One very typical case of Pneumonic Plague—confirmed by bacteriological examination—was removed from among the crew of the s.s. "Cheang Chew" on the 10th July and died on the 12th July. This vessel arrived at Singapore from Amoy and Swatow infected with plague. Two Europeans from Bombay and one Greek from Port Said were removed as cases suspicious of plague but subsequent observation and examination proved them not to be plague.

*Small-pox.*—Nine cases of small-pox were imported. Seven of these by vessels returning with pilgrims from Jeddah. Out of six of these return pilgrim vessels four arrived infected with small-pox.

*Chicken-pox.*—Five cases were landed and treated in the Quarantine Camp at Jelutong.

On account of the occurrence of a few cases of plague in Selangor, vessels from Port Swettenham were inspected from the 25th November to the 8th December.

### Malacca.

REPORT BY DR. F. B. CROUCHER, *Colonial Surgeon.*

1. The Quarantine island was not occupied during 1903. On the report of two cases of plague at Kuala Lumpur in November the sheds on the Quarantine island were put in order and all vessels coming into Malacca harbour from the north were inspected as a precautionary measure and the passengers kept under observation.

### APPENDIX I.

#### GOVERNMENT ANALYST.

REPORT BY MR. P. J. BURGESS, M.A.

1. The work of the laboratory during 1903 compares favourably with that of previous years.

*Water.*—Thirty-six samples of water were examined, 12 of which proved to be unfit for use. The samples were chiefly from the Straits Settlements and Federated Malay States.

*Milk.*—Sixteen samples of milk were analysed, four of which proved to be adulterated.

Nearly all these samples were sent from Government institutions and were taken from milk contractor's daily supply and the returns do not represent the quality of milk supplied to the general public.

No case was observed during the year of adulteration of milk by adding water and sugar, a practice that was common with the contractors in 1901.

*Mineral Assays.*—Fifty-two samples of ore were sent for assay during the year, chiefly from Java and the Federated Malay States. The majority of the ores were examined for gold and silver or tin.

*Foods.*—Ten samples of food were examined for the presence of poison and adulteration.

*Exhibits for Toxicological Examination.*—Ten cases of suspected poisoning were sent for investigation. In two instances morphine poisoning was detected.

*Opium.*—Six samples of chandu were assayed for the quantity and quality of morphine present.

*Coins.*—A large amount of money was analysed during the year, the coins being as follows:—113 Dollars, 11 Fifty Cent pieces, 112 Twenty Cent pieces, 23 Ten Cent pieces; all these coins were counterfeit.

The method of manufacture is simple, it consists of taking an impression of the good money in a plaster of paris mould, trimming the rough casts and cleaning the surface and then finally plating the surface with silver by boiling the money in a solution of silver cyanide in potassium cyanide.

A small quantity of copper is usually added to the tin to improve the quality in casting.

The money thus produced rings well and when new is bright, but it never has quite the same lustre as genuine silver coinage.

It is light in weight but the difference is barely perceptible without a balance. The coins can be readily detected by the public as being false by being soft and easily scratched and cut by the edge of a genuine silver coin. This is a good and safe practical test for counterfeit coins made of tin. In most cases the coarse and clumsy appearance of the coins and the presence of file marks on the rim where the milling was imperfectly cast are easily noted and are sure indications of bad money.

*Petroleum.*—The amount of oil imported into the Colony has increased during 1903. The details for the two years 1902 and 1903 are appended.

*Miscellaneous Exhibits.*—During the year there were examined 55 samples of miscellaneous character including Methylated Spirits, Coal, Urine, Gambier, Gutta, Lemonade, Paint Phosphate, Dynamite, Blood, Pills, Etc.

*Research.*—Some research work on the chemistry of rubber and the latex from rubber trees has been done during the year, but independent work of this character is rendered very difficult by being necessarily carried on during the rare intervals when time can be spared from other work.

*Personal.*—Until the middle of March Dr. DANE continued to act as Government Analyst during my absence on leave. The office staff during the year has worked well and given satisfaction.

*Comparision of Oils Imported into Singapore Between 1902 and 1903.*

Description of Oil.	1902.			1903.		
	Number of Vessels.	Tins.	Tons in Bulk.	Number of Vessels.	Tins.	Tons in Bulk.
<i>Langkat Oil—</i>						
(a) Crown Brand ...	90	394,623	...	63	280,971	1,994
(b) Dragon Brand ...	22	365,020	...	25	336,000	...
American Oil	$\left\{ \begin{array}{l} a \text{ Devoe's} \dots \\ b \text{ Comet} \dots \\ c \text{ Colza} \dots \\ d \text{ Pagoda} \dots \end{array} \right.$	1	70,000	...	1	29,822
		1	40,000	...	...	...
		1	2,000	...	...	...
		...	...	1	100,540	...
Rangoon	...	1	600	...	3	150,481
Russian	...	...	...	2	...	12,784
Palembang	...	32	...	29	...	31,742
Petroleum Residue	...	16	...	22	2,000	38,948
	171	872,243	35,551	146	899,814	85,468

## Singapore.

Return of the Statistics of Population for the Year 1903.

		Europeans.	Eurasians.	Malays.	Chinese.	Tamil.	Other Nationalities.	Total.
Number of Inhabitants in 1903	...	3,965	4,248	36,100	175,345	18,252	2,923	240,833
"    Births during the year 1903	100	129	1,495	2,959	322	84		5,089
"    Deaths " " 1903	70	149	1,631	8,802	727	126		11,505
"    Immigrants " " 1903	{*}							
"    Emigrants " " 1903								
Number of Inhabitants in 1902	...	3,902	4,191	36,091	170,250	18,060	2,807	235,301
Increase or Decrease	... ... ... ...	63	57	9	5,095	192	116	5,532
	... ... ... ...	...	...	...	...	...	...	...

Race or nationality should be specified as nearly as possible in accordance with the above model.

\* No data available.

## Meteorological Return for the Year 1903.

		Temperature.				Rainfall.			Winds.		Remarks.	
		Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Rangc.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.		
January	...	140.3	71.9	85.7	73.5	12.2	79.2	17.38	83	NE		
February	...	138.7	71.8	86.1	73.9	12.2	79.0	9.46	81	NE		
March	...	144.3	71.8	88.5	74.2	14.3	80.1	6.23	79	NE		
April	...	145.3	71.5	88.6	74.7	13.9	80.9	9.32	80	{ ENE ESE		
May	...	142.0	73.4	87.8	75.6	12.2	81.6	4.53	79	SE		
June	...	136.3	72.6	87.8	75.0	12.8	80.7	5.48	80	SSE		
July	...	134.3	71.6	86.5	75.3	11.2	80.8	6.99	78	SSE		
August	...	131.9	71.0	85.2	73.9	11.3	79.3	12.79	82	{ SE SSE		
September	...	138.1	72.0	87.1	74.7	12.4	80.8	4.89	77	SSE		
October	...	138.2	72.0	86.6	74.4	12.2	80.1	4.46	79	{ SE & NW		
November	...	130.9	70.9	85.8	73.4	12.4	78.8	10.13	82	{ NNW NE		
December	...	135.9	69.6	85.1	72.5	12.6	77.8	10.81	79	{ NE & NW		
Mean	...	140.2	71.7	86.7	74.3	12.4	79.9	102.47	80	...		

## SINGAPORE.

*Return of Diseases and Deaths in 1903 at the following Institutions:—General, Tan Tock Seng's, Kandang Kerbau and Prison Hospitals, Quarantine Camp, Quarantine Station and Lunatic Asylum.*

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.	Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions	Deaths.		
<b>I. GENERAL DISEASES.</b>					
Small-pox	...	33	112	23	145
Chicken-pox	...	...	4	...	4
Measles	...	...	12	...	12
Plague	...	...	144	26	144
Dengue	...	...	51	...	52
Influenza	...	1	5	...	2
Mumps	...	...	21	...	21
Diphtheria	...	...	3	...	3
Simple Continued Fever	...	7	258	...	265
Enteric Fever	...	9	103	46	112
Cholera	...	...	344	232	344
Choleraic Diarrhoea	...	...	2	1	2
Dysentery	...	22	482	175	504
Beri-beri	...	172	1,293	457	1,465
Fever, Malarial	...	65	867	78	932
,, Black Water	...	1	...	1	...
,, Unclassified	...	...	166	28	166
Malarial Cachexia	...	...	35	8	35
Phagedæna	...	21	136	24	157
Erysipelas	...	...	1	...	1
Pyæmia	...	...	4	4	4
Septicæmia	...	...	4	3	4
Tetanus	...	...	12	6	12
Tubercle	...	16	397	227	413
Leprosy	...	34	86	22	120
Syphilis, Primary	...	26	212	...	238
,, Secondary	...	35	476	60	511
Gonorrhœa	...	15	147	...	162
Scurvy	...	...	2	...	2
Alcoholism	...	1	22	...	23
Rheumatism	...	32	722	...	754
Gout	...	...	6	...	6
Osteoarthritis	...	1	...	1	...
New Growth, non-malignant	...	1	11	...	12
malignant	...	...	17	9	17
Anæmia	...	35	597	175	632
Diabetes Mellitus	...	1	...	...	1
Malformed Urethra	...	...	1	...	1
Debility	...	33	518	198	551
Old Age	...	12	69	44	81
<b>II. LOCAL DISEASES.</b>					
<b>I. DISEASES OF THE NERVOUS SYSTEM.</b>					
Neuritis	...	2	11	...	13
,, Multiple	...	...	12	1	12
Meningitis	...	2	4	2	6
Myelitis	...	...	3	1	3
Paralysis Spastic	...	...	2	...	2
Locomotor Ataxia	...	4	9	...	13
Insular Sclerosis	...	...	1	...	1
Cerebral Congestion	...	...	1	...	1
Apoplexy	...	...	8	5	8
Paralysis	...	...	2	1	2
Paraplegia	...	1	4	...	5
Hemiplegia	...	10	34	17	44
Monoplegia	...	...	2	...	2
Local Paralysis	...	...	4	...	4
Bed Sore	...	...	2	1	2
Chorea	...	...	1	...	1
<i>Carried forward...</i>	591	7,140	1,874	8,031	553

## Return of Diseases and Deaths in 1903 at the Singapore Hospitals.—Continued.

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.			
<i>Brought forward...</i>	591	7,440	1,874	8,031	553	
<b>II. LOCAL DISEASES.—</b>						
<i>Continued.</i>						
DISEASES OF THE NERVOUS SYSTEM.— <i>Contd.</i>						
Epilepsy	...	4	19	2	23	8
Migraine	...	...	3	...	3	...
Sciatica	...	...	9	...	9	1
Neuralgia	...	...	13	...	13	...
Neurasthenia	...	...	2	...	2	...
Idiocy	...	7	8	1	15	10
Mania	...	74	245	28	320	100
" Delirious	...	...	1	1	1	...
" Puerperal	...	...	1	...	1	...
" Syphilitic	...	2	...	...	2	...
" A'potu	...	...	5	...	5	...
" Senile	...	...	12	4	12	4
Melancholia	...	15	45	6	60	12
" Puerperal	...	...	1	...	1	1
Dementia	...	74	35	10	109	95
" Senile	...	3	1	...	4	1
Delusional Insanity	...	...	6	...	6	...
Toxic Insanity	...	...	2	...	2	...
2. DISEASES OF THE EYE.						
Conjunctivitis	...	3	173	...	176	2
Keratitis	...	1	31	...	32	4
Cornea, Ulceration	...	3	38	...	41	10
" Gangrene	...	4	...	...	4	...
" Opacity	...	3	18	...	21	17
Staphyloma	...	3	66	...	9	3
Iritis	...	3	16	...	19	2
Synechia	...	...	1	...	1	...
Glaucoma	...	1	1	1 <i>a</i>	2	...
Cataract	...	1	5	...	6	...
Panophthalmitis	...	...	2	...	2	...
Total Disorganization	...	...	1	...	1	...
Amaurosis	...	...	2	...	2	...
Blepharitis	...	1	...	...	1	...
Stye	...	...	1	...	1	...
Entropion	...	...	1	...	1	...
3. DISEASES OF THE EAR.						
Otitis, Media	...	1	6	1	7	...
" Suppurative	...	...	1	...	1	...
Otalgia	...	...	1	...	1	...
Mastoid Disease	...	...	1	...	1	...
4. DISEASES OF THE CIRCULATORY SYSTEM.						
Pericarditis	...	...	1	1	1	...
Valvular Disease	...	6	32	20	38	...
Dilatation Heart	...	...	1	1	1	...
Angina Pectoris	...	...	1	...	1	...
Tachycardia	...	...	1	...	1	...
Palpitation	...	...	1	...	1	...
Functional Disease	...	...	1	...	1	...
Atheroma	...	...	1	...	1	...
Aneurysm	...	...	3	1	3	1
Phlebitis	...	2	1	...	3	...
Thrombosis	...	...	2	2	2	...
Varix	...	...	1	...	1	...
5. DISEASES OF THE RESPIRATORY SYSTEM.						
Laryngitis	...	1	3	...	4	...
Bronchitis, Acute	...	2	43	2	45	...
<i>Carried forward...</i>	805	8,246	1,955	9,054	824	

## Return of Diseases and Deaths in 1903 at the Singapore Hospitals.—Continued.

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.	Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.		
<i>Brought forward...</i>	805	8,246	1,955	9,054	824
<b>LOCAL DISEASES.—</b>					
<i>Continued.</i>					
<b>DISEASES OF THE RESPIRATORY SYSTEM.—Ctd.</b>					
Bronchitis, Chronic	...	4	103	107	6
Asthma	...	...	53	53	4
Hæmoptysis	...	...	1	1	...
Pneumonia	...	1	84	85	...
Broncho Pneumonia	...	...	1	1	...
Phthisis	...	...	22	22	...
Emphysema	...	...	4	4	...
Pleurisy	...	...	17	17	...
Empyema	...	...	4	4	...
<b>6. DISEASES OF THE DIGESTIVE SYSTEM.</b>					
Stomatitis	...	...	3	3	...
Caries of Tooth	...	...	2	2	...
Glossitis	...	...	1	1	...
Tonsillitis	...	...	6	6	...
Pharyngitis	...	...	8	8	...
Gastritis	...	...	21	21	...
Gastric Ulcer	...	...	2	2	...
Dilatation of Stomach	...	1	...	1	...
Dyspepsia	...	1	93	94	8
Enteritis	...	...	13	13	...
Typhlitis	...	...	1	1	...
Colitis	...	...	35	35	...
Perityphlitis	...	1	...	1	...
Appendicitis	...	...	9	9	...
Ulcer, Intestines	...	...	2	2	...
Psilosis	...	1	3	4	...
Hernia Ing: Reducible	...	...	10	10	...
" " Strangulated	...	2	1	2	...
Obstruction of Bowel	...	1	...	1	...
Constipation	...	...	50	50	...
Colic	...	...	49	49	...
Diarrhoea	...	18	549	507	7
Ulceration Rectum	...	...	1	1	...
Fistula in Ano	...	...	20	20	3
Prolapse Rectum	...	...	2	2	...
Stricture	...	1	...	1	...
Piles	...	3	26	29	1
Ischio Rectal Abscess	...	...	4	4	...
Hepatitis	...	2	17	19	...
Abscess of Liver	...	2	10	12	1
Cirrhosis of Liver	...	2	44	46	5
Congestion of Liver	...	...	1	1	...
Fatty Degeneration of Liver	...	1	1	1	...
Jaundice	...	...	3	3	...
Peritonitis	...	1	8	9	...
<b>7. DISEASES OF THE LYMPHATIC SYSTEM.</b>					
Glands, Inflammation	...	2	104	100	6
" Suppuration	...	1	11	12	2
" Hypertrophy	...	...	2	2	1
Lymphangitis	...	...	5	5	...
Elephantiasis	...	...	5	5	...
<i>Carried forward...</i>	845	9,660	2,332	10,508	868

*Return of Diseases and Deaths in 1903 at the Singapore Hospitals.—Continued.*

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.	Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.		
<i>Brought forward...</i>	845	9,660	2,332	10,508	868
<b>LOCAL DISEASES.—</b>					
<i>Continued.</i>					
<b>8. DISEASES OF THE URINARY SYSTEM.</b>					
Nephritis, Chronic	...	2	1	3	...
Bright's Disease	...	...	7	7	1
Albuminuria	...	...	9	9	1
Pyelitis	...	...	3	3	...
Haematuria	...	...	1	1	...
Phosphaturia	...	...	1	1	...
Cystitis	...	...	3	3	...
Calculus	...	...	5	5	...
Incontinence of Urine	...	...	1	1	...
<b>9. DISEASES OF THE GENERATIVE SYSTEM.</b>					
Stricture Organic	...	...	14	15	...
Urethral Fistula	...	...	2	2	...
Hypertrophy Prostate	...	...	2	2	...
Phimosis	...	1	14	15	2
Paraphimosis	...	...	7	7	...
Balanitis	...	...	2	2	...
Penis, Abscess	...	1	1	2	...
" Ulcer	...	...	3	3	...
" Gangrene	...	...	2	2	...
Chancroid	...	8	129	137	4
Serotum Abscess	...	...	21	21	1
" Sloughing	...	...	7	7	...
Haematocele	...	...	1	1	...
Hydrocele	...	...	14	14	1
Orchitis	...	2	9	11	...
Epididymitis	...	...	1	1	...
Hernia Testis	...	2	6	8	1
Salpingitis	...	...	1	1	...
Pelvic, Haematocele	...	...	1	1	...
" Peritonitis	...	...	1	1	...
" Cellulitis	...	...	5	5	1
Metritis	...	...	1	1	...
Endometritis	...	...	2	2	...
" Involution	...	...	1	1	...
Procedentia	...	...	1	1	...
<b>10. DISEASES OF THE ORGANS OF LOCOMOTION.</b>					
Periostitis	...	...	7	7	...
Caries	...	...	3	3	1
Necrosis	...	1	12	13	...
Synovitis	...	2	31	33	4
Arthritis, Suppurative	...	...	6	6	...
Ankylosis	...	...	1	1	...
Kyphosis	...	...	2	2	2
Myalgia	...	...	17	17	1
Disease of Elbow Joint	...	...	1	1	...
Talipes	...	...	1	1	...
<b>11. DISEASES OF THE CONNECTIVE TISSUE.</b>					
Inflammation	...	2	34	30	2
Abscess	...	15	190	205	9
Gangrene	...	...	2	2	...
<i>Carried forward...</i>	882	10,246	2,359	11,131	899

## Return of Diseases and Deaths in 1903 at the Singapore Hospitals.—Continued.

Diseases.	Remain-ing in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remain-ing in Hospital at end of 1903.	Remarks.
		Admis-sions.	Deaths.			
<i>Brought forward...</i>	882	10,246	2,359	11,131	899	
<b>LOCAL DISEASES.—</b>						
<i>Continued.</i>						
<b>12. DISEASES OF THE SKIN.</b>						
Erythema	...	...	1	...	1	...
Urticaria	...	...	3	...	3	...
Eczema	...	3	58	...	61	4
Impetigo	...	...	2	...	2	...
Prurigo	...	...	1	...	1	...
Lichen	...	...	2	...	2	...
Psoriasis	...	...	3	...	3	...
Herpes	...	...	5	...	5	...
Pemphigus	...	...	7	...	7	...
Ulcer	...	90	904	...	910	87
Boil	...	...	18	...	18	...
Carbuncle	...	...	9	1	9	1
Whitlow	...	...	1	...	1	...
Onychia	...	1	8	...	9	...
Ingrown Toe Nail	...	...	3	...	3	...
Corn	...	...	1	...	1	...
Keloid	...	...	1	...	1	...
<b>INJURIES.</b>						
General	...	3	129	13	132	3
Local	...	40	624	27	664	8
<b>OPERATIONS.</b>						
Amputation of Leg	...	1	1	...	2	...
“ Arm	...	...	1	...	1	...
“ Finger	...	...	1	...	1	1
“ Toe	...	...	1	...	1	1
Excision of Eyeball	...	...	1	...	1	...
Removal of Glands	...	...	1	...	1	...
Litholapaxy	...	...	1	...	1	...
For Entropion	...	...	1	...	1	...
“ Phimosis	...	...	7	...	7	...
“ Piles	...	...	1	...	1	...
“ Hernia Testis	...	...	1	...	1	...
“ Hydrocele	...	...	1	...	1	...
<b>POISONS.</b>						
Opium	...	1	9	2	10	...
Mercury	...	...	9	...	9	...
Carbolic Acid	...	...	1	...	1	...
Alcohol	...	...	59	...	59	1
<b>HUMAN PARASITES.</b>						
Acarus Scabiei	...	2	111	...	113	5
Tinea Tonsurans	...	1	28	...	29	1
Filaria Sanguinis Hominis	...		2	...	2	...
Tænia Solium	...		1	...	1	...
Ascaris Lumbricoides	...		14	...	14	...
Pregnancy	...		2	...	2	1
Observation	...	2	40	...	42	...
No Appreciable Disease	...	...	119	...	119	...
Total...	1,026	12,439	2,402	13,465	1,042	

## Penang.

(INCLUDES DINDINGS.)

*Return of the Statistics of Population for the Year 1903.*

		Europeans.	Eurasians.	Malays.	Chinese.	Tamils.	Other Nationalities.	Total.
Number of Inhabitants in 1903	...	1,022	1,699	36,937	74,128	18,769	1,802	134,357
„ Births during the year 1903		24	50	1,182	971	374	30	2,631
„ Deaths „ „ 1903		18	33	1,026	3,173	827	48	5,125
„ Immigrants „ „ 1903		* {						
„ Emigrants „ „ 1903								
Number of Inhabitants in 1902	...	1,010	1,678	37,033	73,365	18,879	1,762	133,727
Increase or ... ... ... ...	12	21	...	763	...	40	630	
Decrease ... ... ... ...	...	...	96	...	110	..	...	

Race or nationality should be specified as nearly as possible in accordance with the above model.

\* No data available.

*Meteorological Return for the Year 1903.*

		Temperature.				Rainfall.			Winds.		Remarks.
		Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	
January	...	141.9	62.5	90.1	74.6	15.5	81.5	4.89	68	N	126
February	...	146.8	65.5	91.1	74.8	16.3	81.3	3.50	68	N	114
March	...	148.8	66.9	91.9	74.8	17.1	82.1	0.32	68	N.W	73
April	...	150.0	67.2	91.2	74.1	17.1	81.3	5.43	71	S	55
May	...	150.2	64.8	90.9	75.5	16.4	81.5	7.82	67	S	84
June	...	149.1	65.9	90.5	74.4	16.1	82.0	8.31	67	S	102
July	...	145.3	66.7	88.7	73.8	14.9	80.5	10.27	71	S	128
August	...	143.7	65.6	88.5	73.9	14.6	79.9	6.51	71	S	117
September	...	143.5	66.8	88.5	73.6	14.9	79.8	13.43	71	S	121
October	...	138.4	66.2	87.7	73.5	14.2	79.5	24.21	73	N.W	153
November	...	130.2	66.1	87.1	73.5	13.6	79.0	14.70	74	N.W	144
December	...	135.5	68.7	87.6	73.9	13.7	79.3	4.31	73	N.W	178
Mean	...	143.6	66.1	89.5	74.2	15.3	80.6	103.76	70	...	116

## PENANG.

Return of Diseases and Deaths in 1903 at the following Institutions:—  
General, Pauper, Lock, Prison, Quarantine Camp, European Small-pox, Balik Pulau, Leper Asylum, and Lumut Hospitals.

Diseases.	Remaining in Hospital at end of 1902.	Admis-sions.	Yearly Total.	Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
GENERAL DISEASES.						
Small-pox	...	10	141	26	151	...
Chicken-pox	...	..	50	..	50	...
Measles	...	...	5	..	5	...
Whooping Cough	...	...	1	..	1	...
Mumps	...	...	5	..	5	...
Plague	...	...	1	*1	1	...
Cholera	...	...	3	2	3	...
Simple Continued Fever	...	...	19	..	19	...
Enteric Fever	...	1	18	6	19	...
Dysentery	...	3	129	50	132	2
Beri-beri	...	47	272	82	319	16
Malarial Fever, Intermittent	14	...	625	1	639	11
Remittent	1	...	55	41	56	...
Malarial Cachexia	...	...	8	2	8	...
Erysipelas	...	...	3	..	3	...
Puerperal Septicæmia	...	...	1	..	1	...
Tetanus	...	...	6	5	6	...
Syphilis, Primary	...	20	157	..	177	13
" Secondary	...	90	496	31	586	93
Gonorrhœa	...	2	88	..	90	3
Alcoholism	...	1	38	..	39	...
Delirium Tremens	...	...	1	1	1	...
Rheumatism	...	17	160	..	177	...
Rheumatic Fever	...	...	1	..	1	...
Anæmia	...	10	156	30	166	10
Debility	...	17	278	113	295	11
Phagedæna	...	1	35	16	36	5
Leprosy	...	257	262	93	519	345
Scurvy	...	...	1	1	1	...
Old Age	...	4	26	19	30	4
NEW GROWTHS.						
Naso-pharyngeal Polypus	...	...	1	..	1	...
Papilloma	...	...	1	..	1	...
Condyloma	...	...	1	..	1	1
Sarcoma	...	...	3	1	3	...
Cancer	...	...	4	1	4	...
Lymphoma	...	...	1	..	1	...
Cyst	...	...	1	..	1	...
Wart	...	...	3	..	3	...
Malignant Dis: Uterus	...	...	1	..	1	1
Tumour (not classified)	...	...	2	..	2	...
LOCAL DISEASES.						
DISEASES OF THE NERVOUS SYSTEM.						
Multiple Neuritis	...	...	1	..	1	1
Locomotor Ataxy	...	...	1	..	1	...
Meningitis, Chronic	...	...	1	1	1	...
Softening of Brain	...	...	1	1	1	...
Cerebral Haemorrhage	...	...	2	2	2	...
Paraplegia	...	...	10	3	10	1
Hemiplegia	...	7	44	6	51	5
Headache	...	...	2	..	2	...
Neuralgia	...	...	5	..	5	...
Sciatica	...	...	1	..	1	...
Mania	...	...	2	..	2	1
Melancholia	...	...	4	..	4	3
Dementia	...	15	137	2	152	14
Neuritis	...	1	4	..	5	...
Secondary Lateral Sclerosis	...	...	2	..	2	1
General Paralysis	...	...	1	1	1	...
Paralysis Agitans	...	...	1	..	1	1
Convulsions	...	...	1	1	1	...
Carried forward...		518	3,279	539	3,797	542

## Return of Diseases and Deaths in 1903 at the Penang Hospitals:—Continued.

Diseases.	Remain-ing in Hospital at end of 1902.	Yearly Total.	Total Cases Treated.	Remain-ing in Hospital at end of 1903.	Remarks.
	Admis-sions.	Deaths.			
<i>Brought forward...</i>	518	3,279	539	3,797	542
<b>LOCAL DISEASES.—</b>					
<i>Continued.</i>					
<b>DISEASES OF THE NERVOUS SYSTEM—Contd.</b>					
Epilepsy	...	1	6	...	7
Hemicrania	...	...	3	...	3
Apoplexy	...	...	1	1	...
<b>DISEASES OF THE EYE.—</b>					
Keratitis	...	...	2	...	2
Ulcer Cornea	...	...	4	...	4
Staphyloma	...	2	7	...	0
Iritis	...	1	18	...	19
Glaucoma	...	1	1	...	2
Amblyopia	...	6	2	...	8
Amaurosis	...	5	7	...	12
Conjunctivitis, Catarrhal	...	12	47	...	59
" Purulent	...	7	10	...	17
Choroiditis and Atrophy of the Optic Disc	...	...	1	...	1
Hypopyon.	...	...	2	...	2
Cataract	...	...	11	...	11
Optic Nervitis	...	...	1	...	1
Atrophy and Degeneration of the Optic Nerve	...	1	...	...	1
" Drunken Eye-ball	...	...	15	...	15
Atrophy of the Optic Disc	...	...	1	...	1
<b>DISEASES OF THE EAR.—</b>					
Inflammation, Externa Meatus	...	5	...	5	1
Accumulation of Wax	...	1	...	1	Accumulation of wax.
Suppuration, Middle Ear	...	4	...	4	Suppuration in middle ear.
<b>DISEASES OF THE NOSE:—</b>					
Ozœna	...	...	1	...	1
Epistaxis	...	...	2	...	2
<b>DISEASES OF THE CIRCULATORY SYSTEM.</b>					
Valvular Disease, Mitral	...	...	14	10	14
" " Aortic	...	...	17	8	17
Varicose Veins	...	...	2	...	2
Aneurysm	...	1	1	...	2
<b>DISEASES OF THE RESPIRATORY SYSTEM.</b>					
Laryngitis	...	...	1	1	1
Asthma	...	3	45	...	48
Bronchitis, Acute	...	...	14	...	14
" Chronic	...	1	55	22	50
Pneumonia	...	2	36	14	38
Broncho Pneumonia	...	...	1	1	1
Tubercular Phthisis	...	17	246	134	263
Abscess Lung	...	...	1	...	1
Pleurisy	...	1	2	1	3
Emphysema	...	...	1	...	1
Empyema	...	...	1	1	1
Hæmoptysis	...	...	1	...	1
Chr: Pneumonic Phthisis	...	5	1	5	5
<b>DISEASES OF THE DIGESTIVE SYSTEM.</b>					
Stomatitis	...	...	3	...	3
Gum Boil	...	...	3	...	3
Caries, Teeth	...	...	1	...	1
" Alveolus	...	1	2	...	3
<i>Carried forward...</i>	580	3,883	713	4,463	590

## Return of Diseases and Deaths in 1903 at the Penang Hospitals:—Continued.

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admis-sions.	Deaths.			
<i>Brought forward...</i>	580	3,883	713	4,463	590	
<b>LOCAL DISEASES.—</b>						
<i>Continued.</i>						
<b>DISEASES OF THE DIGESTIVE SYSTEM.</b>						
<i>Contd.</i>						
Pharyngitis	...	3	...	3	...	
Gastritis	...	3	...	3	...	
Dyspepsia	...	44	...	45	1	
Appendicitis	...	6	...	6	...	
Sprue	...	1	1	1	...	
Hernia Inguinal	...	3	1	3	1	
Constipation	...	18	...	18	...	
Colic	...	48	...	48	1	
Diarrhoea	11	479	203	490	22	
" Acute	...	2	2	2	...	
Anal Abscess	...	1	...	1	...	
Ischio Rectal Abscess	...	3	...	3	...	
Fissure Anus	...	1	...	1	1	
Fistula in Ano	...	3	...	3	...	
Pruritis Ani	...	1	...	1	...	
Congestion of Liver	...	4	...	4	...	
Cirrhosis of Liver	3	41	22	44	1	
Abscess of Liver	...	3	2	3	...	
Jaundice	...	1	...	1	...	
" Malignant	...	1	1	1	...	
Suppurative Cholecystitis	...	1	...	1	...	
Peritonitis	...	1	1	1	...	
Ulceration of Mouth	...	1	...	1	...	
Prolapsus Ani	...	2	...	2	...	
Hæmorrhoids	1	10	...	11	...	
Hepatitis	1	4	1	5	...	
Ascites	1	3	2	4	...	
Tonsillitis	...	2	...	2	...	
<b>DISEASES OF THE LYMPHATIC SYSTEM.</b>						
Inflammation of Glands	...	22	...	22	2	
Suppuration of Glands	1	52	...	53	4	
Lymphangitis	...	3	...	3	...	
Bubo	...	6	...	6	...	
Ague	2	14	...	16	1	
<b>DISEASES OF THE URINARY SYSTEM.</b>						
Bright's Disease	2	15	7	17	1	
Suppression of Urine	...	1	...	1	...	
Nephritis, Acute	...	29	5	29	...	
" Chronic	...	10	6	10	2	
<b>DISEASES OF THE GENERATIVE SYSTEM.</b>						
<i>MALE.</i>						
Urethritis	...	1	...	1	...	
Stricture Urethra	...	9	...	9	1	
Urethral Fistula	...	1	...	1	...	
Soft Chancre	...	21	...	21	...	
Abscess Scrotum	...	2	...	2	...	
Sloughing Scrotum	...	2	* 1	2	...	
Hydrocele	...	6	...	6	...	
Hæmatocele	...	3	...	3	...	
Orchitis	...	12	...	12	...	
Hernia Testis	...	6	...	6	...	
Ulcer Scrotum	...	4	...	4	...	
Gleet	...	1	...	1	1	
Phimosis	...	1	...	1	...	
Ulcer, Penis	...	36	...	36	...	
<i>Carried forward...</i>	603	4,838	968	5,441	629	

\* Exhaustion.

## Return of Diseases and Deaths in 1903 at the Penang Hospitals:—Continued.

1903

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.			
<i>Brought forward</i>	629	4,838	968	5,441	629	
<b>LOCAL DISEASES.—</b>						
<i>Continued.</i>						
<b>DISEASES OF THE GENERATIVE SYSTEM.—Contd.</b>						
<b>FEMALE.</b>						
Inflammation of Vagina	...	...	1	...	1	...
Ulcer Vagina	...	...	6	...	6	...
Amenorrhœa	...	...	1	...	1	...
Menorrhœgia	...	...	1	...	1	...
Endometritis	...	...	2	...	2	1
Lencorrhœa	...	...	1	...	1	...
Granular Erosion Cervix	...	2	4	...	6	...
Abscess Labia	...	1	...	...	1	...
Recto Vaginal Fistula	...	1	2	...	3	1
Pelvic Cellulitis	...	...	2	...	2	...
Subinvolution of Uterus	...	...	1	...	1	...
Pelvic Peritonitis	...	...	1	...	1	1
Labour, Natural	...	...	1	...	1	...
Abscess Breast	...	...	1	...	1	...
<b>DISEASES OF THE ORGANS OF LOCOMOTION.</b>						
Periostitis	...	...	2	1*	2	...
Caries	...	2	5	...	7	1
Necrosis	...	...	2	...	2	...
Synovitis	...	6	15	...	21	4
Suppurative Arthritis	...	...	3	...	3	1
Lumbago	...	...	6	...	6	...
Ankylosis	...	...	1	...	1	...
Inflammation of Arm	...	...	2	...	2	...
<b>DISEASES OF THE CONNECTIVE TISSUE.</b>						
Cellulitis	...	...	8	1	8	
Abscess	...	4	86	1†	90	5
Elephantiasis	...	...	2	...	2	
Sinus	...	...	7	...	7	1
<b>DISEASES OF THE SKIN.</b>						
Eczema	...	1	29	...	30	2
Pemphigus	...	...	1	...	1	1
Acne	...	...	1	...	1	...
Ulcer	...	48	586	1‡	634	71
Carbuncle	...	...	4	...	4	...
Boil	...	...	8	...	8	...
Onychia	...	...	1	...	1	...
Whitlow	...	...	1	...	1	...
Mycosis Fungoides	...	...	1	...	1	...
Mycetoma	...	...	1	...	1	...
Gangrene (leg)	...	...	1	1	1	...
Bed Sore	...	...	1	...	1	...
Herpes	...	...	1	...	1	...
<b>INJURIES.</b>						
<b>GENERAL.</b>						
Burns and Scalds	...	1	20	2	27	1
Multiple Injury	...	1	9	...	10	...
Privation	...	...	1	1	1	...
Wounds, Incised	...	...	7	...	7	...
" Contused	...	...	1	...	1	...
" Lacerated	...	...	1	...	1	...
" Punctured	...	...	1	...	1	...
Contusions	...	...	3	...	3	...
<i>Carried forward</i>	670	5,678	976	6,248	720	

## Return of Diseases and Deaths in 1903 at the Penang Hospitals:—Continued.

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.	Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks
		Admissions.	Deaths.		
<i>Brought forward...</i>	670	5,678	976	6,248	720
LOCAL DISEASES.— <i>Continued.</i>					
INJURIES.— <i>Contd.</i>					
<i>Head.</i>					
Wound, Scalp	...	2	134	136	1
Contusion, Scalp	...	1	...	1	...
Fracture, Vault of Skull	...	...	5	5	...
" Base	...	...	1	1	...
Concussion, Brain	...	...	1	1	...
<i>Face and Mouth.</i>					
Contusion	...	...	8	8	...
Wound	...	...	22	22	1
Fracture, Lower Jaw	...	...	1	1	...
Incised Wound, Cheek	...	...	1	1	...
Contused Wound, Cheek	...	...	1	1	...
Wound of Tongue	...	...	1	1	...
<i>Eye.</i>					
Mechanical Injury	...	...	2	2	...
Foreign Body in Cornea	...	...	1	1	...
Wound, of Eyeball	...	...	1	1	...
<i>Ear.</i>					
Wound, Pinna	...	...	1	1	...
<i>Neck.</i>					
Wound, Superficial	...	...	1	1	...
" Throat	...	...	1	1	...
<i>Chest.</i>					
Contusion	...	...	6	6	1
Wound, Superficial	...	1	7	8	...
" Penetrating	...	...	2	1*	* of lung and pleura.
<i>Back.</i>					
Contusion	...	1	7	8	...
Sprain	...	...	1	1	1
Wound	...	...	3	3	...
<i>Abdomen.</i>					
Contusion	...	...	1	1	...
Wound, Penetrating	...	...	2	2	...
Rupture, Spleen	...	...	1	1	+
+ of stomach and pancreas.					
<i>Pelvis and Organs of Generation:—</i>					
Wound, Scrotum	...	...	2	2	...
" Perineum	...	...	1	1	...
Rupture Bladder	...	...	1	1	...
<i>Upper Extremity.</i>					
Contusion	...	...	13	13	...
Sprain	...	...	5	5	...
Wound	...	1	51	52	...
Fracture, Clavicle, S.	...	...	3	3	...
" Humerus, S.	...	...	1	1	...
" Radius, S.	...	...	2	2	...
" Radius, C.	...	...	1	1	...
" Ulna, S.	...	...	1	1	...
" Ulna, C.	...	...	1	1	...
" Radius and Ulna, C.	...	1	1	1	...
Dislocation, Phalanges	...	1	1	1	...
Wound, Incised, of Hand	...	1	1	1	...
" Shoulder	...	1	1	1	...
Dislocation of Wrist	...	3	1	3	...
<i>Carried forward...</i>	676	5,979	981	6,655	724

## Return of Diseases and Deaths in 1903 at the Penang Hospitals:—Continued.

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.			
<i>Brought forward</i>	676	5,979	981	6,655	724	
<b>LOCAL DISEASES.—</b>						
<i>Continued.</i>						
INJURIES— <i>Contd.</i>						
<i>Lower Extremity.</i>						
Contusion	...	1	37	...	38	...
Sprain	...	...	3	...	3	...
Wound	...	1	83	...	84	1
Boot Bite	...	...	19	...	19	...
Fracture Femur, S.	...	...	2	...	2	...
„ Tibia, S.	...	...	1	...	1	...
„ Tibia, C.	...	...	3	...	3	1
„ Tibia and Fibula, C.	...	...	2	...	2	1
Wound, Punctured Thigh	...	...	2	...	2	...
„ Thigh	...	...	1	...	1	...
„ Leg	...	...	5	...	5	...
„ Lacerated Leg	...	...	1	...	1	1
„ of Foot	...	...	1	...	1	...
Sprain, Ankle	...	...	2	...	2	...
Dislocation, of Femur	...	...	1	...	1	1
Contusion, Hip	...	1	5	...	6	...
OPERATIONS.						
Removal of Tumour	...	...	4	...	4	...
For Ununited Fracture of Tibia	...	...	1	...	1	...
Amputation Fingers	...	...	5	...	5	...
„ Leg	...	...	1	...	1	...
For Harelip	...	...	1	...	1	...
Extraction Lens	...	1	4	...	5	...
Excision, Eyeball	...	...	1	...	1	...
Thoracotomy and Excision of Rib	...	...	2	1	2	1
For Radical Cure Hernia	...	...	1	...	1	...
For Strangulated Hernia	...	...	2	2	2	...
„ Fistula in Ano	...	...	1	...	1	...
„ Abscess Liver	...	...	2	1	2	...
Lithotomy Suprapubic	...	...	2	...	2	...
External Urethrotomy	...	...	1	...	1	...
Laparotomy	...	...	1	1	1	...
Removal of Urethral Calculi	...	...	1	...	1	1
For Phimosis	...	2	11	...	13	...
For Hæmatocoele	...	...	1	...	1	1
Amputation Thigh	...	...	3	2	3	...
For Fractured Patella	...	...	1	...	1	1
Amputation Toe	...	...	1	...	1	...
POISONS.						
Ammonia	...	...	1	...	1	...
Hydargyri Perchlor	...	...	2	...	2	...
Stramonium	...	...	1	...	1	...
Opium	...	...	5	3	5	...
Dog Bite	...	...	1	...	1	...
Opium Habit	...	...	14	...	14	...
Morphia Habit	...	...	4	...	4	...
Alcohol	...	...	1	...	1	...
Mercurial Stomatitis	...	...	1	...	1	...
PARASITES.						
Ascaris Lumbricoides	...	...	14	...	14	...
Guinea Worm	...	...	1	...	1	...
Ringworm	...	1	6	...	7	...
Itch	...	1	71	...	72	4
Tinea Imbricata	...	...	1	...	1	...
Observation	...	3	61	...	64	1
No Discoverable Disease	...	40	219	...	259	42
Total	...	727	6,597	991	7,324	780

## Province Wellesley.

*Return of the Statistics of Population for the Year 1903.*

		Europeans.	Eurasians.	Malays.	Chinese.	Tamil.	Other Nationalities.	Total
Number of Inhabitants in 1903	...	185	302	68,899	26,847	19,765	1,080	117,078
,, Births during the year	1903	5	12	2,712	465	595	24	3,813
,, Deaths	,, 1903	2	1	1,679	899	684	14	3,279
,, Immigrants	,, 1903	}	}					
,, Emigrants	,, 1903							
Number of Inhabitants in 1902	...	176	298	68,882	26,470	19,437	1,004	116,267
Increase or Decrease	...	9	4	17	377	328	76	811

Race or nationality should be specified as nearly as possible in accordance with the above model.

\* No data available.

*Meteorological Return for the Year 1903.*

	Temperature.						Rainfall.		Winds.		Remarks.
	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
January ... ...	147.7	72.3	92.4	74.5	17.9	81.9	4.03	76			
February ... ...	149.9	71.0	93.6	75.0	18.5	82.4	2.66	71			
March ... ...	134.9	72.3	95.2	75.7	19.5	83.1	2.46	74			
April ... ...	138.5	72.9	93.6	74.5	19.1	82.1	8.94	77			
May ... ...	146.7	73.8	93.3	75.3	18.0	82.6	4.65	77			
June ... ...	146.4	73.2	92.8	74.6	18.2	82.2	3.14	77			
July ... ...	145.0	72.2	91.9	73.4	18.5	81.4	9.88	76			
August ... ...	144.1	71.5	90.5	72.5	18.2	80.4	8.18	79			
September ... ...	145.7	72.5	91.0	73.5	17.5	81.2	4.97	77			
October ... ...	141.4	71.3	89.3	72.4	16.9	80.0	16.55	80			
November ... ...	138.5	71.0	87.5	71.6	15.9	79.1	7.81	79			
December ... ...	137.2	70.7	87.4	72.3	15.1	78.6	4.02	78			
Mean	143.0	72.6	91.5	73.7	17.8	81.2	Total 77.29	77			

## PROVINCE WELLESLEY.

*Return of Diseases and Deaths in 1903 at the following Institutions:—District Hospitals, Butterworth, Bukit Mertajam, and Sungei Bakap.*

Diseases.	Remain-ing in Hospital at end of 1902.	Yearly Total.	Deaths.	Total Cases Treated	Remain-ing in Hospital at end of 1903	Remarks
	Admis-sions.					
<b>GENERAL DISEASES.</b>						
Small-pox	...	...	22	5	22	...
Whooping Cough	...	...	1	...	1	...
Febricula	...	...	62	...	62	...
Dysentery	...	2	32	16	34	1
Beri-beri	...	5	60	24	65	17
Malarial Fever	...	...	41	5	41	3
Intermittent Fever	...	...	6	...	6	...
Remittent Fever	...	...	2	2	2	...
Malarial Cachexia	...	...	2	...	2	1
Phagedæna	...	...	5	3	5	...
Tubercle of Hip	...	...	3	...	3	...
"    Knee	...	...	2	...	2	...
Leprosy	...	...	13	...	13	...
Yaws	...	...	1	...	1	...
Primary Syphilis	...	...	5	...	5	...
Secondary "	...	3	62	3	65	3
Tertiary "	...	...	4	1	4	...
Myxoedema	...	...	1	...	1	...
Gonorrhœa	...	...	17	...	17	1
Worms	...	...	2	...	2	...
Mercurial Poisoning	...	...	1	...	1	...
Alcoholism	...	...	5	...	5	...
Rheumatism	...	6	74	...	80	4
Rheumatoid Arthritis	...	...	2	...	2	...
Epithelioma	...	...	1	...	1	...
Sarcoma	...	...	1	1	1	...
Cyst	...	1	...	...	1	...
Cancer	...	...	1	1	1	...
Fatty Tumour	...	...	1	...	1	...
Anæmia	...	9	100	41	109	12
Debility	...	5	61	16	66	8
Old Age	...	1	2	...	3	1
<b>LOCAL DISEASES.</b>						
<b>DISEASES OF THE NERVOUS SYSTEM.</b>						
Myelitis	...	1	1	2	2	...
Primary Lateral Sclerosis	...	3	1	2	4	...
Disseminated	...	...	1	...	1	...
Locomotor Ataxia	...	...	1	...	1	...
Landry's Paralysis	...	...	1	1	1	...
Apoplexy	...	...	1	1	1	...
Paraplegia	...	...	1	...	1	...
Hemiplegia	...	...	5	2	5	2
Neuralgia	...	...	1	...	1	...
Cephalalgia	...	...	2	...	2	...
Epilepsy	...	1	1	1	2	...
Hyperæsthesia	...	...	1	...	1	...
Sciatica	...	...	2	...	2	...
Hiccough	...	...	1	...	1	...
Idiocy	...	...	1	...	1	...
Mania	...	...	3	...	3	1
Dementia	...	...	1	...	1	...
<b>DISEASES OF THE EYE.</b>						
Conjunctivitis	...	...	13	...	13	1
Purulent Ophthalmia	...	1	5	...	6	...
Keratitis	...	...	4	...	4	2
Cataract	...	...	1	...	1	1
Ulcer of Cornea	...	...	5	...	5	...
Iritis	...	...	3	...	3	...
Panophthalmitis	...	...	2	...	2	2
<i>Carried forward</i>	...	38	650	127	688	60

*Return of Diseases and Deaths in 1903 at the Province Wellesley  
Hospitals.—Continued.*

Diseases.	Remain-ing in Hospital at end of 1902.	Admis-sions.	Yearly Total.	Total Cases Treated.	Remain-ing in Hospital at end of 1903.	Remarks.
<i>Brought forward...</i>	38	650	127	688	60	
<b>LOCAL DISEASES—</b>						
<i>Continued.</i>						
<b>DISEASES OF THE EAR.</b>						
Inflammation of Ear (int'l.)	1	1	...	2	...	
Inflammation of Middle Ear (external)	...	5	...	5	...	
<b>DISEASES OF THE CIRCULATORY SYSTEM.</b>						
Valvular Disease Heart, Aortic	...	10	2	10	...	
" " Mitral	...	10	3	10	2	
Dilatation of Heart	...	1	1	1	...	
Bradycardia	...	2	...	2	...	
<b>DISEASES OF THE RESPIRATORY SYSTEM.</b>						
Bronchitis	2	11	...	13	...	
Spasmodic Asthma	...	8	...	8	...	
Congestion of Lung	1	3	2	4	...	
Adhesion of Pleura	...	1	...	1	...	
Pneumonia	2	16	10	18	...	
Tubercle of Lung	...	4	3	4	...	
Phthisis	1	16	8	17	...	
Abscess of Lung	...	1	1	1	...	
<b>DISEASES OF THE DIGESTIVE SYSTEM.</b>						
Stomatitis	...	1	...	1	...	
Gangrene of Mouth	...	1	...	1	...	
Inflammation of Gum	...	1	...	1	...	
" Pharynx	...	4	1	4	...	
Dyspepsia	...	9	...	9	...	
Gastritis	...	1	...	1	...	
Gastralgia	...	1	...	1	...	
Acute Intestinal Obstruction	...	2	2	2	...	
Perforation of Abdomen	...	2	2	2	...	
Constipation	...	4	...	4	...	
Colic	...	8	...	8	...	
Hernia Inguinal	...	1	...	1	...	
Diarrhea	6	99	47	105	4	
Fistula in Ano	...	3	...	3	...	
Retrocele	...	1	...	1	...	
Hemorrhoids	...	1	...	1	...	
Suppurative Cholecystitis	...	7	...	7	...	
Cirrhosis of Liver	1	24	16	25	...	
Abscess of Liver	...	1	...	1	...	
Congestion of Liver	...	2	...	2	...	
Hypertrophy of Liver	...	2	2	2	...	
Peritonitis	...	1	1	1	...	
Perisplenitis	1	...	...	1	...	
Hypertrophy of Spleen	...	1	...	1	...	
<b>DISEASES OF THE LYMPHATIC SYSTEM.</b>						
Inflammation Lymphatic Glands	...	6	...	6	1	
Bubo	2	11	...	13	1	
Lymphangitis	...	5	...	5	...	
Obstruction of Lymphatics	...	1	...	1	1	
Lumbago	...	1	...	1	...	
<i>Carried forward...</i>	55	940	228	995	70	

*Return of Diseases and Deaths in 1903 at the Province Wellesley Hospitals.—Continued.*

Diseases,	Remaining in Hospital at end of 1902.	Yearly Total.	Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
	Admissions.	Deaths.			
<i>Brought forward ...</i>	55	940	228	995	70
LOCAL DISEASES.— <i>Continued.</i>					
DISEASES OF THE URINARY SYSTEM.					
Bright's Disease	...	4	1	4	...
Pyelitis	...	1	1	1	...
Chronic Cystitis	...	3	1	3	...
Retention of Urine	...	4	1	4	...
Incontinence of Urine	...	1	1	1	...
Stricture Urethra	...	6	...	6	...
Urethral Fistula	...	2	...	2	...
DISEASES OF THE GENERATIVE SYSTEM.					
Phimosis	...	1	—	1	...
Paraphimosis	...	2	...	2	...
Ulcer of Penis	...	9	...	9	...
Chancroid	...	7	...	7	...
Sloughing of Serotum	...	2	...	2	...
Orchitis	...	2	...	2	...
Abscess of Testicle	...	1	...	1	...
Hernia Testis	...	1	...	1	...
Endometritis	...	1	...	1	...
Mammary Abscess	...	1	...	1	...
FEMALE ORGANS					
Ulcer of Vulva	...	3	...	3	...
Abortion	...	3	...	3	...
Leucorrhœa	...	2	...	2	...
DISEASES OF THE ORGANS OF LOCOMOTION.					
Periostitis	...	2	...	2	...
Cancer of Jaw	...	1	1	1	...
Caries of Bone	...	1	...	2	1
Necrosis	...	2	...	2	...
Synovitis	...	9	...	9	...
Bursitis	...	1	...	1	...
Ankylosis Elbow	...	3	...	3	1
Myalgia	...	1	...	1	...
DISEASES OF THE CONNECTIVE TISSUE.					
Cellulitis	...	6	...	6	...
Abscess	...	16	1	17	2
Gangrene	...	2	1	2	1
DISEASES OF THE SKIN.					
Eczema	...	14	...	14	...
Impetigo	...	2	...	2	...
Ulcer	...	17	174	191	9
Dermatitis	...	1	...	1	...
Onychia	...	2	...	2	1
Scabies	...	2	8	10	...
Whitlow	...	1	...	1	...
Ringworm	...	1	...	1	...
Lichen	...	1	...	1	...
GENERAL INJURIES.					
Burns	...	5	...	5	1
Multiple Injury	...	1	...	1	...
Punctured Wound of Thigh	...	1	...	1	...
Contusion, Left Eye	...	1	...	1	...
<i>Carried forward ...</i>	76	1,252	236	1,328	86

*Return of Diseases and Deaths in 1903 at the Province Wellesley Hospitals.—Continued.*

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total		Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.			
<i>Brought forward ...</i>	76	1,252	236	1,328	86	
<b>LOCAL DISEASES.—</b>						
<i>Continued.</i>						
<b>GENERAL INJURIES—<i>Contd</i></b>						
Wound of Scalp ...	...	35	...	35	...	
Fract. of Base of the Skull ...	...	2	1	2	...	
" Nasal Bone ...	...	1	...	1	...	
" Clavicle ...	...	1	...	1	...	
" Humerus ...	...	5	...	5	...	
" Forearm ...	...	2	...	2	...	
" Radius ...	...	4	...	4	...	
" Ulna ...	...	3	...	3	...	
" Spine ...	...	1	...	1	...	
" Femur ...	...	3	...	3	1	
" Ribs ...	...	1	...	1	...	
Wound of Face ...	...	4	...	4	...	
Cut Throat ...	...	2	1	2	...	
Wound of Lung ...	...	1	1	1	...	
Contusion of Back ...	...	1	...	1	...	
Wound of Back ...	...	2	...	2	...	
Contusion of Chest ...	...	5	...	5	...	
" Abdomen ...	...	1	...	1	...	
" Ankle ...	...	1	...	1	...	
Wound of Scrotum ...	...	1	...	1	...	
Rupture Bladder ...	...	1	...	1	...	
Contusion Upper Extremity ...	...	4	...	4	...	
Dislocation of Humerus ...	...	1	...	1	...	
Wound of Eyelid ...	...	2	...	2	...	
Superficial Wd. of Abdomen ...	...	2	...	2	...	
Wound Upper Extremity ...	...	22	...	22	...	
Incised Wound of Cheek ...	...	4	...	1	...	
" Neck ...	...	2	...	2	1	
" Chest ...	...	1	1	1	...	
" " Sternum ...	...	1	...	1	...	
" " Upper Arm ...	...	1	...	1	...	
" " Leg ...	...	2	...	2	...	
Contusion of Lower Extremities ...	...	3	...	3	...	
Sprain ...	...	4	...	4	...	
Wound Lower Extremity ...	...	26	...	26	1	
<b>OPERATIONS.</b>						
Amputation of Forearm ...	...	1	...	1	...	
Circumcision ...	...	1	...	1	...	
For Haemorrhoids ...	...	2	...	2	...	
Urinary Fistula ...	...	1	...	1	...	
For Abscess of Wrist ...	...	1	...	1	...	
" Hypopyon ...	...	1	...	1	...	
" Rodent Ulcer ...	...	1	1	1	...	
" Dacryocystitis ...	...	1	...	1	...	
" Fistula ...	...	1	...	1	...	
" Abscess of Hip ...	...	1	...	1	1	
Perforating Wd. of Abdomen ...	...	1	...	1	...	
For Sinus of Leg ...	...	1	...	1	1	
" Removal of Glands ...	...	1	...	1	...	
" Necrosis of Os Calcis ...	...	1	...	1	1	
<b>POISONS.</b>						
Stramonium ...	...	10	...	10	...	
Observation ...	...	43	...	43	2	
<i>Total ...</i>	76	1,469	241	1,545	94	

## Malacca.

Return of the Statistics of Population for the Year, 1903.

		Europeans.	Eurasians.	Malays.	Chinese.	Tamils.	Other Nationalities.	Total.
Number of Inhabitants in 1903	...	63	1,554	73,589	19,782	1,204	84	96,276
,,    Births during the year 1903	...		66	3,312	504	24	70	3,976
,,    Deaths   ,,   1903	3		63	2,261	916	38	51	3,332
,,    Immigrants   ,,   1903	...		...	...	468	44	...	512
,,    Emigrants   ,,   1903	*							...
Number of Inhabitants in 1902	...	68	1,579	73,316	19,637	1,236	88	95,924
Increase or Decrease	...	...	...	273	145	...	...	352
	...	5	25	...	...	32	4	...

Race or nationality should be specified as nearly as possible in accordance with the above model.

\* No data available.

## Meteorological Return for the Year 1903.

	Temperature.					Rainfall.			Winds.		Remarks.
	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
January	152.9	63.3	89.8	69.9	19.9	79.6	3.09	93	NNE	215	
February	150.3	62.1	89.3	69.8	19.5	79.3	3.36	93	NE	193	
March	150.5	62.4	89.2	69.7	19.4	79.3	1.02	94	NE	205	
April	146.1	62.7	89.2	70.3	14.2	79.7	4.66	91	NE	267	
May	151.2	63.2	88.7	70.0	18.8	79.7	2.31	94	NE	200	
June	152.4	62.7	89.7	70.2	19.7	79.5	8.75	93	NE	240	
July	150.5	62.0	89.0	69.4	19.7	79.7	7.59	93	SE	288	
August	154.0	64.7	89.3	69.7	19.6	79.6	14.88	95	NE	171	
September	154.2	59.1	89.5	69.2	19.7	78.5	4.71	93	NE	170	
October	156.2	63.1	90.0	70.3	19.6	79.6	13.68	95	NE	173	
November	156.7	63.7	89.6	70.2	19.3	79.3	8.23	94	NE	179	
December	161.5	62.7	89.7	69.8	20.1	78.9	2.50	95		290	
Mean	153.4	58.5	89.4	69.9	19.1	79.4	Total 74.78	94	..	215	

## MALACCA.

*Return of Diseases and Deaths in 1903 at the following Institutions:—General, Pauper, Contagious Diseases and Gaol Hospitals, Malacca, and District Hospitals Alor Gajah and Jasin.*

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.			
<b>GENERAL DISEASES.</b>						
Small-pox	...	...	49	10	49	...
Dengue	...	1	...	1	...	
Mumps	...	1	...	1	...	
Febricula	...	20	...	20	...	
Enteric Fever	...	3	2	3	...	
Dysentery	...	64	26	64	3	
Beri-beri	19	294	84	313	84	
Intermittent Fever	8	341	...	349	12	
Remittent Fever	...	15	12	15	...	
Malarial Cachexia	1	7	2	8	...	
Malig : Quot. Ague	...	1	...	1	...	
Phagedæna	5	58	17	63	5	
Erysipelas	...	2	1	2	...	
Tubercle	...	1	...	1	1	
Leprosy	...	12	1	12	...	
Syphilis, Primary	...	16	...	16	...	
" Secondary	8	98	...	106	3	
" Tertiary	...	13	1	13	...	
Gonorrhœa	1	26	...	27	3	
Alcoholism	...	1	1	1	...	
Rheumatism	5	119	...	124	11	
Scrofula	...	2	...	2	...	
New Growth	...	1	...	1	...	
Anæmia	16	111	16	127	5	
Hæmophilia	...	1	1	1	...	
Debility	4	50	12	54	3	
Old Age	...	5	2	5	...	
<b>LOCAL DISEASES.</b>						
<b>DISEASES OF THE NERVOUS SYSTEM.</b>						
Dis : Sclerosis	...	...	1	...	1	...
Ataxic Paraplegia	...	2	1	2	...	
Spastic	...	1	...	1	...	
Hemiplegia	7	4	3	11	1	
Bed Sore	...	1	...	1	...	
Neuralgia	...	2	...	2	...	
Idiocy	...	1	...	1	...	
Mania	...	1	1	1	...	
Dementia	...	1	...	1	...	
<b>DISEASES OF THE EYE.</b>						
Conjunctivitis Cat : Puru :	...	11	...	11	...	
Keratitis	...	3	...	3	1	
Ulcer Cornea	...	7	...	7	1	
Iritis	...	2	...	2	1	
Hypopyon	...	1	...	1	...	
Cataract	...	1	...	1	...	
Amaurosis	1	3	...	3	...	
Disorganisation of Eyeball	...	5	...	5	1	
<b>DISEASES OF THE EAR.</b>						
Inf : Ext : Meatus	...	5	...	5	1	
<b>DISEASES OF THE NOSE.</b>						
Epistaxis	...	1	...	1	...	
<i>Carried forward...</i>	75	1,368	193	1,443	136	

## Return of Diseases and Deaths in 1903 at the Malacca Hospitals.—Continued.

Diseases.	Remaining in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
		Admissions.	Deaths.			
<i>Brought forward</i>	75	1,368	193	1,443	136	
<b>LOCAL DISEASES—</b>						
<i>Continued.</i>						
<b>DISEASES OF THE CIRCULATORY SYSTEM.</b>						
Pericarditis	...	1	1	1	...	
Valvular Disease of Heart, Mitral	...	17	7	17	3	
Angina Pectoris	...	1	...	1	...	
Arrhythmia Cordis	...	1	...	1	...	
Pulmon: Embolism	...	1	1	1	...	
<b>DISEASES OF THE RESPIRATORY SYSTEM</b>						
Laryngitis Syphilitic	...	1	...	1	...	
Bronchitis	...	26	1	26	...	
Hæmoptysis	...	1	1	1	...	
Pneumonia	...	11	2	11	1	
Broncho-Pneumonia	...	11	4	11	1	
Phthisis	3	67	36	70	3	
Asthma	2	8	...	10	1	
Pleurisy	...	1	...	1	...	
Empyema	...	4	4	4	...	
<b>DISEASES OF THE DIGESTIVE SYSTEM.</b>						
Stomatitis Ulcer	...	2	...	2	...	
Stomatitis Gang:	...	1	...	1	...	
Thrush	...	1	...	1	...	
Caries Tooth	...	2	...	2	...	
Sore Throat	...	2	...	2	...	
Ulceration and Perforation	...	1	1	1	...	
Dyspepsia	...	13	...	13	2	
Hernia Inguinal	...	1	...	1	...	
Colic	...	12	...	12	...	
Elongated Uvula	...	1	...	1	...	
Diarrœa	6	83	36	89	3	
Fistula in Ano	...	2	...	2	...	
Piles	...	1	...	1	...	
Liver Abscess	...	2	...	2	...	
Cirrhosis Liver	...	5	5	5	...	
Jaundice	...	3	...	3	...	
Dropsy	...	21	7	21	...	
Peritonitis	...	1	1	1	...	
<b>DISEASES OF THE LYMPHATIC SYSTEM.</b>						
Splenitis	...	3	...	3	...	
Ague Cake	3	25	...	28	3	
Bubo	...	21	...	21	1	
Lymphangitis	...	2	...	2	...	
<b>DISEASES THYROID BODY.</b>						
Graves's Disease	...	1	...	1	1	
<b>DISEASES OF THE URINARY SYSTEM.</b>						
Chronic Nephritis	1	15	7	16	4	
<i>Carried forward</i>	90	1,740	307	1,830	159	

## Return of Diseases and Deaths in 1903 at the Malacca Hospitals.—Continued

Diseases.	Remaining in Hospital at end of 1902.	Admissions.	Yearly Total.	Total Cases Treated.	Remaining in Hospital at end of 1903.	Remarks.
<i>Brought forward...</i>	90	1,740	307	1,830	159	
<b>LOCAL DISEASES—</b>						
<i>Continued.</i>						
<b>DISEASES OF THE GENERATIVE SYSTEM.</b>						
Stricture (Spas.)	...	...	1	...	1	...
Phimosis	...	...	3	...	3	...
Ulcer Penis	...	2	13	...	15	...
Abscess Scrotum	...	...	3	...	3	...
Sloughing Scrotum	...	...	2	...	2	1
Oedema Scrotum	...	...	1	...	1	...
Ulcer Scrotum	...	...	1	...	1	...
Eczema Scrotum	...	...	2	...	2	...
Hydrocele	...	...	2	...	2	...
Orchitis	...	...	2	...	2	...
Oophoritis	...	...	1	...	1	...
Prolap : Uter	...	...	1	...	1	...
Vaginitis	...	...	3	...	3	...
<b>DISEASES OF FEMALE BREAST.</b>						
Abscess Breast	...	...	1	...	1	...
<b>DISEASES OF THE ORGANS OF LOCOMOTION SYSTEM.</b>						
Periostitis	...	...	9	...	9	...
Necrosis	...	1	1	...	2	...
Arthritis	...	...	1	...	1	1
Synovitis	...	1	15	...	16	2
Gon : Rheumatism	...	1	5	...	5	...
Morbus Coxæ	...	...	3	2	3	1
Lumbar Abscess	...	1	...	...	1	...
Lumbago	...	...	2	...	2	...
Supp : Knee Joint	...	...	1	1	1	...
<b>DISEASES OF THE CONNECTIVE TISSUE.</b>						
Cellulitis	...	...	3	...	3	...
Abscess	...	2	38	...	40	3
Gangrene	...	...	3	2	3	...
Elephantiasis	...	...	1	...	1	...
<b>DISEASES OF THE SKIN.</b>						
Urticaria	...	...	1	...	1	...
Eczema	...	1	26	...	27	3
Psoriasis	...	...	2	...	2	...
Herpes	...	...	4	...	4	...
Acne	...	...	1	...	1	...
Ichthyosis	...	1	...	1	1	...
Ulcer	...	59	690	...	749	56
Boil	...	...	3	...	3	...
Onychia	...	...	3	...	3	...
Itch	...	2	21	...	23	1
Ringworm	...	2	8	...	10	1
<b>INJURIES.</b>						
<b>GENERAL.</b>						
Burns and Scalds	...	...	5	...	5	...
Multiple Injury	...	...	12	1	12	1
Asphyxia	...	...	1	1	1	...
<i>Carried forward...</i>	162	2,635	315	2,797	229	

## Return of Diseases and Deaths in 1903 at the Malacca Hospitals.—Continued.

Diseases.	Remain-ing in Hospital at end of 1902.	Yearly Total.		Total Cases Treated.	Remain-ing in Hospital at end of 1903.	Remarks.
		Admis-sions.	Deaths.			
<i>Brought forward ...</i>	162	2,635	315	2,797	229	
<b>INJURIES—Continued.</b>						
LOCAL.						
Wound Scalp	...	...	20	...	20	...
Fracture Skull	...	...	2	...	2	1
Concussion Brain	...	...	1	...	1	...
Contusion Face	...	...	1	...	1	...
Wound Face	...	...	6	...	6	...
Contusion Eyelid	...	...	1	...	1	...
Wound Eyeball	...	...	1	...	1	...
Wound Cornea	...	...	2	...	2	...
" Neck	...	1	...	1	...	...
Contusion Chest	...	...	8	...	8	...
Wound Back	...	...	1	...	1	...
Penet: Wound Abdomen	...	1	1	1	1	...
Contusion Upper Extremity	...	12	...	12	1	...
Wound Upper Extremity	...	14	...	14	3	
Fracture Humerus	...	4	...	4	...	
" Radius	...	2	...	2	...	
" Ulna	...	1	...	1	...	
Collis's Fracture	...	1	...	1	...	
Sprain Wrist	...	1	...	1	...	
Contusion Lower Extremity	...	3	...	3	...	
Sprain Lower Extremity	...	1	...	1	...	
Wound Lower Extremity	...	22	...	22	1	
Dislocation Hip	...	1	...	1	...	
Cpd. Fracture Femur	...	1	1	1	2	...
Cpd. Fracture Tibia and Fibula	...	1	1	1	2	...
Injury Pelvis	...	1	...	1	1	...
" Spine	...	1	...	1	1	...
OPERATIONS.						
Strang: Ing: Hernia	...	1	...	1	...	
Rad: Cure Cong: Hydrocele	...	1	...	1	...	
Amp: Leg	...	1	...	1	1	...
Amp: Finger	...	1	...	2	...	
App: Forcep (Difficult Labour)	...	1	...	1	1	...
Laparotomy	...	1	1	1	1	...
TUMOURS.						
Cancer	...	1	...	1	...	
" Rectum	...	2	2	2	2	...
Sarcoma Shoulder	...	1	1	1	1	...
POISONS.						
Ptomaine Poisoning	...	1	1	1	1	...
Alcohol	...	1	...	1	1	...
HUMAN PARASITE.						
Ascaris Lumbricoides	...	1	...	1	...	
Ankylost: Duod:	...	2	...	2	...	
No Ap: Disease	...	14	...	14	...	
Malingering	...	5	...	5	...	
Observation	...	1	86	87	3	
<i>Total...</i>	166	2,866	322	3,032	239	

*The following operations were performed at the General Hospital, Singapore, during 1903:—*

Removal of Non-malignant Tumour, 5; Removal Malignant Tumour, 3; Removal Bullet, 4; Incision of Abscess, 11; Incision and Scraping of Carbuncle, 1; Ligature of Common Carotid Artery for Aneurysm, 1; Excision of Varicose Veins, 1; Ligature Vessel for Hæmorrhage, 1; Incision Bubo, 3; Removal of Lymphatic Glands, 15; Scraping Ulcers, 2; Scraping Sinuses, 8; Suturing Wounds Simple, 6; Suturing Wounds Involving Viscera, 1; Evulsion of Toe Nail, 1; Trepanning Thigh, 1; Removal of Sequestrum, 8; Resection of Bone, 6; Reduction of Dislocation, 2; Examination of Hip Joint, 1; Excision of Knee Joint, 1; Breaking Down Adhesions Shoulder, 1; Tenotomy, 1; Union of Divided Tendon, 1; Amputations, 18; Trephining Skull, 1; Puncture Spinal Canal, 1; Removal of Cataract, 1; Enucleation of Eyeball, 3; Opening of Mastoid Cells, 1; Tracheotomy, 2; Paracentesis Thoracis, 7; Exploration Pleural Cavity, 2; Incision and Drainage of Empyæma, 2; Abdominal Examination, 1; Radical Cure of Hernia, 2; For Strangulated Hernia, 2; Laparotomy, 2; For Abscess of Liver, 4; Exploration of Liver, 5; For Fistula in Ano, 11; For Fissure in Ano, 1; Ligature Hæmorrhoids, 5; Rectal Examination, 1; Catheterisation, 3; Supra Puncture of Bladder, 1; Litholapaxy, 1; External Urethrotomy, 2; For Urinary Fistula, 4; Circumcision, 17; Radical Cure of Hydrocele, 10; Replacing Retroflexed Uterus, 1; Dilatation of Ceroix Uteri, 2; Curetting Uterus, 2. Total, 200 cases.